

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 14,6 A 4
Edition : 05.11.86
Superceeded : -
Calibrating oil : ISO-4113
Combination no. : 0 401 848 755
Injection pump
Pump designation : PE8P110A32OLS3802-10
EP type number : 0 411 818 710
Governor
Governor design. : RQ300/1150PA437-3
Governor no. : 0 421 801 230

Customer-spec. information
Customer : DAIMLER-BENZ

Engine : OM422

1st version kW : 184.0
Speed 1/min: 2300

TEST BENCH REQUIREMENTS

Calibrating-oil
inlet temp. °C : 38...42
Overflow valve : 1 417 413 025
Inlet press., bar : 1.50

Overflow
quantity min. 1/h: 100...120

Calibrating nozzle-holder
assembly : 0 681 343 009

Opening
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter
x Wall thickness
x Length mm : 6.00x1.50x600

(A) Injection pump setting values
Insp. values in parentheses
Set constant delivery quant.
per values -----

START OF DELIVERY
Test pressure, bar: 25...27

Prestroke mm : 4.00...4.10
: (3.95...4.15)
Contr.-rod trav.mm: 9.00...12.00
Cam sequence : 8- 7- 2- 6- 3- 5-
4- 1

SD ang. spacing°CS: 0-45-90-135-180-225-
270-315
Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 8

BASIC SETTING

1st speed 1/mi: 1150
Contr.-rod trav.mm: 11.00...11.10
Del.quantity cm3/ : 11.3...11.5
100H.: (11.0...11.7)
Dispersion cm3/ : 0.4
100H.: (0.8)

2nd speed 1/min: 300.0
Contr.-rod trav. m: 8.5...8.7
Del.quantity cm3/ : 1.4...2.0
100H.: (1.1...2.2)
Dispersion cm3/ : 0.4
100H.: (0.7)

SLEEVE POSITION

Control-lever position
Degree: -1
Speed 1/min: 650
Contr.-rod travelmm: 13.20...14.00

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version
Speed 1/min: 1150
Del.quantity cm3/ : 113.0...115.0
1000H.: (110.5...117.5)
Dispersion cm3/ : 4.00
1000H.: (8.00)

HIGHEST RATED SPEED

Setting point:
Speed 1/min : 650
Contr.-rod trav.mm: 13.6

Testing:
1st c-rod trav.mm : 10.00
Speed 1/min : 1195...1210
2nd c-rod trav.mm : 4.00

Speed 1/min : 1260...1290  
4th speed 1/min : 1350  
C-rod trav.mm : 0.00...1.50

#### LOWEST RATED SPEED I

Setting point w/out aux. spring  
Speed 1/min : 300  
Contr.-rod trav.mm: 7.1

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 8.50  
Speed 1/min : 300  
C-rod trav.mm : 7.00...7.20  
C-rod trav.mm : 2.00  
Speed 1/min : 400...440

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1150  
C-rod trav.mm : 11.00...11.10  
2nd speed 1/min : 600  
C-rod trav.mm : 11.20...11.40

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 600  
Del. quantity cm<sup>3</sup>/ : 92.0...96.0  
1000H.: (89.0...99.0)  
Dispersion cm<sup>3</sup>/ : 6.00  
1000H.: (9.00)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : PEN 6,1 N  
Edition : 14.11.86  
Superceeded : 11.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 403 476 044  
  
Injection pump  
Pump designation : PES6MW100/32ORS1132  
EP type number : 0 413 406 124  
Governor  
Governor design. : RSV650...750MW4/311-1  
Governer no. : 0 420 085 023

Customer-spec. information  
Customer : VOLVO-PENTA

Engine : TD 61 G

1st version kW : 83.0  
Speed 1/min: 1500

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 2.90...3.00  
: (2.85...3.05)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 700

Contr.-rod trav.mm: 11.30...11.40

Del.quantity cm3/ : 8.2...8.4

100H.: (8.0...8.6)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 650.0

Contr.-rod trav. m: 6.3...6.4

Del.quantity cm3/ : 1.7...2.1

100H.: (1.5...2.2)

Dispersion cm3/ : 0.35

100H.: (0.5)

## SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...1.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 700

Del.quantity cm3/ : 82.0...84.0

1000H.: (80.0...86.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 33...41

Testing:

1st c-rod trav.mm : 10.30

Speed 1/min : 750...760

2nd c-rod trav.mm : 4.00

Speed 1/min : 765...795

4th speed 1/min : 950

C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever

position degrees: 27...35

Setting point w/out aux. spring  
Speed 1/min : 650  
Contr.-rod trav.mm: 5.8...5.9

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19.00  
Speed 1/min : 650  
C-rod trav.mm : 5.80...5.90

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : PEN 6,1 P 2  
Edition : 28.10.86  
Superceeded : 11.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 403 476 045  
  
Injection pump  
Pump designation : PES6MW100/32ORS1132  
EP type number : 0 413 406 124  
Governor  
Governor design. : RSV650...750MW4/311-  
2  
Governor no. : 0 420 085 024  
  
Customer-spec. information  
Customer : VOLVO-PENTA  
  
Engine : TID 61 KG  
  
1st version kW : 102.0  
Speed 1/min: 1500

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.50  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600  
  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32  
  
Prestroke mm : 2.90...3.00  
: (2.85...3.05)

A05

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 700  
-----  
Contr.-rod trav.mm: 12.80...12.90  
-----  
Del.quantity cm<sup>3</sup>/ : 11.3...11.5  
-----  
100H.: (11.1...11.7)  
-----  
Dispersion cm<sup>3</sup>/ : 0.35  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 650.0  
Contr.-rod trav. m: 6.2...6.3  
Del.quantity cm<sup>3</sup>/ : 1.7...2.1  
100H.: (1.5...2.2)  
Dispersion cm<sup>3</sup>/ : 0.35  
100H.: (0.5)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Contr.-rod travelmm: 0.30...1.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 700  
Del.quantity cm<sup>3</sup>/ : 113.0...115.0  
1000H.: (111.0...117.0)  
Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 34...42

## Testing:

1st c-rod trav.mm : 11.80  
Speed 1/min : 750...760  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 780...810  
4th speed 1/min : 950  
C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever  
position degrees: 27...35

Setting point w/out aux. spring

Speed 1/min : 650

Contr.-rod trav.mm: 5.7...5.8

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.00

Speed 1/min : 650

C-rod trav.mm : 5.70...5.80

SET IDLE AUXILIARY SPRING

Speed 1/min : 650

Contr.-rod trav.mm: 6.20...6.30

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 6,0 D 18  
Edition : 14.11.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 403 476 057  
Injection pump  
Pump designation : PES6MW100/72ORS1129-  
2  
EP type number : 0 413 406 140  
Governor  
Governor design. : RSV300...1300MWOA324  
Governor no. : 0 420 085 079

Customer-spec. information  
Customer : DB

Engine : OM 366 LA

1st version kW : 150.0  
Speed 1/min: 2600

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.70...3.80  
: (3.65...3.85)

A07

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1280

Contr.-rod trav.mm: 11.90...12.00

Del.quantity cm3/ : 9.3...9.5

100H.: (9.1...9.7)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 5.9...6.1

Del.quantity cm3/ : 0.8...1.4

100H.: (0.7...1.5)

Dispersion cm3/ : 0.35

100H.: (0.5)

## SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...1.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1280

Charge press. hPa : 900

Del.quantity cm3/ : 93.5...95.5

1000H.: (91.5...97.5)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 56...64

Testing:

1st c-rod trav.mm : 10.90

Speed 1/min : 1320...1330

2nd c-rod trav.mm : 4.00

Speed 1/min : 1385...1415

4th speed 1/min : 1450

C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever

position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 300  
Contr.-rod trav.mm: 5.9...6.1

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 7.60  
Speed 1/min : 300  
C-rod trav.mm : 5.90...6.10

SET IDLE AUXILIARY SPRING  
Contr.-rod trav.mm: 2.00

compensator (LDA,ADA,ALDA)

1st version  
Setting  
Speed 1/min : 500  
Pressure hPa : -  
Contr.-rod trav.mm: 9.90...10.00

Measurement  
Speed 1/min : 500

1st pressure hPa : 175  
C-rod trav.mm : 10.40...10.60  
2nd pressure hPa : 300  
C-rod trav.mm : 11.20...11.40  
3rd pressure hPa : 900  
C-rod trav.mm : 11.90...12.00

#### FUEL-DELIVERY CHARACTERISTICS

1st version  
Charge press. hPa : 900  
Speed 1/min : 750  
Del.quantity cm3/ : 83.5...86.5  
1000H.: (81.0...89.0)  
Dispersion cm3/ : 5.00  
1000H.: (7.00)  
Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 46.5...48.5  
1000H.: (44.5...50.5)

Remarks:  
Check electrically unlatched starting  
fuel delivery (EES) with 24 volt.



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 8,7 P 2  
Edition : 12.09.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 403 546 008  
Injection pump  
Pump designation : PE6MW100/72ORS1126  
EP type number : 0 413 506 101  
Governor  
Governor design. : RQ300/1250MW12-2  
Governor no. : 0 420 082 020

Customer-spec. information  
Customer : DB

Engine : OM360A

1st version kW : 147.0  
Speed 1/min: 2500

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.80...3.90  
: (3.75...3.95)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1250

Contr.-rod trav.mm: 12.90...13.00

Del.quantity cm3/ : 9.7...9.9

100H.: (9.5...10.1)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 8.6...8.7

Del.quantity cm3/ : 1.0...1.4

100H.: (0.7...1.6)

Dispersion cm3/ : 0.35

100H.: (0.5)

## SLEEVE POSITION

Control-lever position

Degree: -2

Speed 1/min: 650

Contr.-rod travelmm: 13.10...13.90

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1250

Del.quantity cm3/ : 97.0...99.0

1000H.: (95.0...101.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 42...50

Setting point:

Speed 1/min : 650

Contr.-rod trav.mm: 13.5

Testing:

1st c-rod trav.mm : 11.90

Speed 1/min : 1295...1310

2nd c-rod trav.mm : 4.00

Speed 1/min : 1415...1445

3rd c-rod trav.mm : 0.10...1.00

Speed 1/min : 1550

LOWEST RATED SPEED I

Control-lever

position degrees: 13...21

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 8.6...8.7

Testing:

Speed 1/min : 220

C-rod trav.mm min : 10.40

Speed 1/min : 300

C-rod trav.mm : 8.6...8.7

C-rod trav.mm : 2.00

Speed 1/min : 430...470

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750

Del.quantity cm3/ : 90.5...94.5

1000H.: (88.5...96.5)

Dispersion cm3/ : 5.00

1000H.: (7.00)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 12,7 B  
 Edition : 12.09.86  
 Superceeded : 12.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 403 548 001  
 Injection pump  
 Pump designation : PE8MW100/72OLS1010  
 EP type number : 0 413 508 001  
 Governor  
 Governor design. : RQ300/1150MW17  
 Governer no. : 0 420 082 005

Customer-spec. information  
 Customer : KHD

Engine : BF8L413F

1st version kW : 212.0  
 Speed 1/min: 2300

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 30...32

Prestroke mm : 3.10...3.20  
 : (3.05...3.25)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 8- 7- 2- 6- 5-  
 4- 3

SD ang. spacing°CS: 0-45-90-135-180-225-  
 270-315

Tolerance + - ° : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 750

Contr.-rod trav.mm: 12.20...12.30

Del.quantity cm3/ : 13.1...13.3

100H.: (12.9...13.5)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 6.3...6.5

Del.quantity cm3/ : 1.2...1.6

100H.: (1.0...1.9)

Dispersion cm3/ : 0.35

100H.: (0.5)

**SLEEVE POSITION**

Control-lever position

Degree: -2

Speed 1/min: 650

Cont.-rod travelmm: 18.20...20.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 750

Charge press. hPa : 740

Del.quantity cm3/ : 131.0...133.0

1000H.: (129.0...135.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 29...37

Setting point:

Speed 1/min : 650

Contr.-rod trav.mm: 19.5

Testing:

1st c-rod trav.mm : 9.20

Speed 1/min : 1195...1210

2nd c-rod trav.mm : 4.00

Speed 1/min : 1240...1270

3rd c-rod trav.mm : 0.00...1.00  
Speed 1/min : 1400

fuel delivery (EES) with 24 volt.

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 6...14  
Setting point w/out aux. spring  
Speed 1/min : 300  
Contr.-rod trav.mm: 6.3...6.5

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 7.80  
Speed 1/min : 300  
C-rod trav.mm : 6.3...6.5  
C-rod trav.mm : 2.00  
Speed 1/min : 365...405

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 750  
C-rod trav.mm : 12.20...12.30  
3rd speed 1/min : 1050  
C-rod trav.mm : 11.20...11.40  
4th speed 1/min : 1150  
C-rod trav.mm : 10.20...10.50

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 740  
Contr.-rod trav.mm: 12.20...12.30

#### Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 9.90...10.00  
2nd pressure hPa : 160  
C-rod trav.mm : 10.30...10.60  
3rd pressure hPa : 500  
C-rod trav.mm : 11.80...11.90

#### SWITCH-OVER POINT

Speed 1/min : 230 (250)

#### FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 87.5...89.5  
1000H.: (85.5...91.5)

#### Remarks:

Check electrically unlatched starting

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 12,7 C1  
Edition : 12.09.86  
Superceeded : 9.82  
Calibrating oil : ISO-4113

Combination no. : 0 403 548 004

Injection pump  
Pump designation : PE8MW100/720LS1010  
EP type number : 0 413 508 001  
Governor  
Governor design. : RQ300...1250MW32  
Governor no. : 0 420 082 008

Customer-spec. information  
Customer : KHD

Engine : BF8L413F

1st version kW : 235.0  
Speed 1/min: 2500

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.10...3.20  
                  : (3.05...3.25)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 8- 7- 2- 6- 5-  
4- 3

SD ang. spacing<sup>o</sup>CS: 0-45-90-135-180-225-  
270-315

Tolerance + - <sup>o</sup> : 0.50 (0.75)

#### BASIC SETTING

1st speed 1/mi: 1250

Contr.-rod trav.mm: 12.20...12.30

Del.quantity cm<sup>3</sup>/ : 13.0...13.2

100H.: (12.8...13.4)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 6.4...6.6

Del.quantity cm<sup>3</sup>/ : 1.2...1.6

100H.: (1.0...1.9)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.5)

#### SLEEVE POSITION

Control-lever position

Degree: -2

Speed 1/min: 600

Contr.-rod travelmm: 19.20...20.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1250

Charge press. hPa : 700

Del.quantity cm<sup>3</sup>/ : 130.0...132.0

1000H.: (128.0...134.0)

Dispersion cm<sup>3</sup>/ : 3.50

1000H.: (6.00)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 29...37

Setting point:

Speed 1/min : 600

Contr.-rod trav.mm: 20.0

Testing:

1st c-rod trav.mm : 11.20

Speed 1/min : 1295...1310

2nd c-rod trav.mm : 4.00

Speed 1/min : 1345...1375

3rd c-rod trav.mm : 0.00...1.00  
Speed 1/min : 1500

#### LOWEST RATED SPEED I

Control-lever

position degrees: 9...17

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 6.4...6.6

#### Testing:

Speed 1/min : 100

C-rod trav.mm min : 8.10

Speed 1/min : 300

C-rod trav.mm : 6.4...6.6

C-rod trav.mm : 2.00

Speed 1/min : 375...415

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 850

C-rod trav.mm : 12.70...12.80

2nd speed 1/min : 950

C-rod trav.mm : 12.40...12.60

3rd speed 1/min : 1200

C-rod trav.mm : 12.20...12.30

4th speed 1/min : 1250

C-rod trav.mm : 12.20...12.30

compensator (LDA, ADA, ALDA)

#### 1st version

Setting

Speed 1/min : 500

Pressure hPa : 300

Contr.-rod trav.mm: 11.90...12.00

#### Measurement

Speed 1/min : 500

1st pressure hPa : 700

C-rod trav.mm : 12.7...12.8

2nd pressure hPa : 225

C-rod trav.mm : 10.40...10.70

3rd pressure hPa : -

C-rod trav.mm : 9.70...9.80

#### FUEL-DELIVERY CHARACTERISTICS

#### 1st version

Charge press. hPa : 700

Speed 1/min : 850

Del.quantity cm<sup>3</sup>/ : 130.5...134.5

1000H.: (128.5...136.5)

Dispersion cm<sup>3</sup>/ : 5.00

1000H.: (7.00)

Charge press. hPa : -

Speed 1/min : 500

Del. quantity cm<sup>3</sup>/ : 84.5...86.5  
1000H.: (82.5...88.5)

Check electrically unlatched starting  
fuel delivery (EES) with 24 volt.

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 13,4 D1  
Edition : 12.09.86  
Superceeded : 12.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 403 548 013  
  
Injection pump  
Pump designation : PE8MW100/720LS1117  
EP type number : 0 413 508 101  
Governor  
Governor design. : RQV425...900MW66  
Governor no. : 0 420 083 097

Customer-spec. information  
Customer : KHD

Engine : F 8L 513 OPT.

1st version kW : 153.0  
Speed 1/min: 1800

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.10...3.20  
                  : (3.05...3.25)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 8- 7- 2- 6- 5-  
                  4- 3

SD ang. spacing°CS: 0-45-90-135-180-225-  
                                  270-315  
Tolerance + - ° : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 900

Contr.-rod trav.mm: 12.50...12.60

Del.quantity cm3/ : 10.7...10.9

100H.: (10.5...11.1)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 425.0

Contr.-rod trav. m: 7.4...7.5

Del.quantity cm3/ : 1.3...1.7

100H.: (1.1...2.0)

Dispersion cm3/ : 0.35

100H.: (0.5)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 940

Sleeve travel mm: 8.70...8.90

2nd speed 1/min: 990

Sleeve travel mm: 9.40...10.00

3rd speed 1/min: 550

Sleeve travel mm: 3.20...4.00

4th speed 1/min: 425

Sleeve travel mm: 1.40...2.20

## SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 900

Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 900

Del.quantity cm3/ : 107.0...109.0

1000H.: (105.0...111.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version



Control-lever  
position degrees: 51...59

Testing:  
1st c-rod trav.mm : 11.50  
Speed 1/min : 940...950  
2nd c-rod trav.mm : 4.50  
Speed 1/min : 1000...1030  
3rd c-rod trav.mm : 0.00...1.00  
Speed 1/min : 1150

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28  
Setting point w/out aux. spring  
Speed 1/min : 425  
Contr.-rod trav.mm: 7.4...7.5

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 9.00  
Speed 1/min : 425  
C-rod trav.mm : 7.4...7.5

#### CONSTANT REGULATION

Speed 1/min : 450...750

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 900  
C-rod trav.mm : 12.50...12.60  
2nd speed 1/min : 675  
C-rod trav.mm : 13.00...13.10  
3rd speed 1/min : 775  
C-rod trav.mm : 12.70...12.90

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 675  
Del.quantity cm3/ : 111.5...113.5  
1000H.: (109.5...115.5)  
Dispersion cm3/ : 5.00  
1000H.: (7.00)

#### Remarks:

Check electrically unlatched starting  
fuel delivery (EES) with 24 volt.

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 13,4 DS  
Edition : 24.11.86  
Superceeded : 12.09.86  
Calibrating oil : ISO-4113  
  
Combination no. : 0 403 548 015  
  
Injection pump  
Pump designation : PE8MW100/72OLS1117  
EP type number : 0 413 508 101  
Governor  
Governor design. : RQV450...1150MW70  
Governor no. : 0 420 083 103

Customer-spec. information  
Customer : KHD

Engine : F 8L 513

1st version kW : 155.0  
Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.10...3.20  
                  : (3.05...3.25)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 8- 7- 2- 6- 5-  
                  4- 3

SD ang. spacing°CS: 0-45-90-135-180-225-  
                          270-315  
Tolerance + - ° : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1150

Contr.-rod trav.mm: 11.80...11.90

Del.quantity cm3/ : 9.0...9.2

100H.: (8.8...9.4)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 450.0

Contr.-rod trav. m: 7.6...7.7

Del.quantity cm3/ : 1.3...1.7

100H.: (1.1...2.0)

Dispersion cm3/ : 0.35

100H.: (0.5)

## SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1170

Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1150

Del.quantity cm3/ : 90.0...92.0

1000H.: (88.0...94.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 52...60

Testing:

1st c-rod trav.mm : 10.80

Speed 1/min : 1190...1200

2nd c-rod trav.mm : 4.50

Speed 1/min : 1255...1285

3rd c-rod trav.mm : 0.00...1.00

Speed 1/min : 1350

## LOWEST RATED SPEED I

Control-lever

position degrees: 14...22  
Setting point w/out aux. spring  
Speed 1/min : 450  
Contr.-rod trav.mm: 7.6...7.7

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9.10  
Speed 1/min : 450  
C-rod trav.mm : 7.6...7.7

CONSTANT REGULATION

Speed 1/min : 470...570

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1150  
C-rod trav.mm : 11.80...11.90  
2nd speed 1/min : 875  
C-rod trav.mm : 13.10...13.20  
3rd speed 1/min : 1050  
C-rod trav.mm : 12.10...12.40

SWITCH-OVER POINT

Speed 1/min : 370 (390)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 875  
Del.quantity cm3/ : 101.0...103.0  
1000H.: (99.0...105.0)  
Dispersion cm3/ : 5.00  
1000H.: (7.00)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 13,4 D6  
Edition : 12.09.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 0 403 548 016  
  
Injection pump  
Pump designation : PE8MW100/72OLS1118  
EP type number : 0 413 508 102  
Governor  
Governor design. : RQ300...1100MW71  
Governor no. : 0 420 082 021

Customer-spec. information  
Customer : KHD

Engine : BF8L513

1st version kW : 172.0  
Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.10...3.20  
                  : (3.05...3.25)

Contr.-rod trav.mm: 9.00...12.00

A20

Cam sequence : 1- 8- 7- 2- 6- 5-  
                  4- 3

SD ang. spacing°CS: 0-45-90-135-180-225-  
                                  270-315  
Tolerance + - ° : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 11.70...11.80

Del.quantity cm3/ : 10.3...10.5

100H.: (10.1...10.7)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 8.0...8.1

Del.quantity cm3/ : 1.3...1.7

100H.: (1.1...1.9)

Dispersion cm3/ : 0.35

100H.: (0.5)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 1150  
Sleeve travel mm: 6.40...6.60

2nd speed 1/min: 1200  
Sleeve travel mm: 9.50...10.40

3rd speed 1/min: 800  
Sleeve travel mm: 5.80...6.20

4th speed 1/min: 300  
Sleeve travel mm: 1.70...2.50

## SLEEVE POSITION

Control-lever position  
Degree: -2  
Speed 1/min: 650  
Contr.-rod travelmm: 19.20...20.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm3/ : 103.0...105.0  
1000H.: (101.0...107.0)  
Dispersion cm3/ : 3.50  
1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever  
position degrees: 27...35

Setting point:  
Speed 1/min : 650  
Contr.-rod trav.mm: 20.0

Testing:  
1st c-rod trav.mm : 10.70  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1185...1215  
3rd c-rod trav.mm : 0.00...1.00  
Speed 1/min : 1300

LOWEST RATED SPEED I  
Control-lever  
position degrees: 10...18  
Setting point w/out aux. spring  
Speed 1/min : 300  
Contr.-rod trav.mm: 8.0...8.1

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 8.00

CONSTANT REGULATION  
Speed 1/min : 330...400

SWITCH-OVER POINT  
Speed 1/min : 220 (250)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 12,7 T5  
 Edition : 24.11.86  
 Superceeded : 12.09.86  
 Calibrating oil : ISO-4113

Combination no. : 0 403 548 017

Injection pump  
 Pump designation : PE8MW100/720LS1117  
 EP type number : 0 413 508 101  
 Governor  
 Governor design. : RQ300...1150MW61-1  
 Govenrer no. : 0 420 082 022

Customer-spec. information  
 Customer : KHD

Engine : F 8L 513

1st version kW : 188.0  
 Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Test pressure, bar: 30...32

Prestroke mm : 3.10...3.20  
 : (3.05...3.25)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 8- 7- 2- 6- 5-  
 4- 3

SD ang. spacing°CS: 0-45-90-135-180-225-  
 270-315

Tolerance + - ° : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1150

Contr.-rod trav.mm: 11.50...11.60

Del.quantity cm3/ : 10.5...10.7

100H.: (10.3...10.9)

Dispersion cm3/ : 0.35

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 8.0...8.1

Del.quantity cm3/ : 1.1...1.5

100H.: (0.9...1.7)

Dispersion cm3/ : 0.35

100H.: (0.5)

## SLEEVE POSITION

Control-lever position

Degree: -2

Speed 1/min: 650

Cont.-rod travelmm: 19.20...20.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1150

Del.quantity cm3/ : 105.0...107.0

1000H.: (103.0...109.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 30...38

Setting point:

Speed 1/min : 650

Contr.-rod trav.mm: 20.0

Testing:

1st c-rod trav.mm : 10.50

Speed 1/min : 1190...1200

2nd c-rod trav.mm : 4.50

Speed 1/min : 1265...1295

3rd c-rod trav.mm : 0.00...1.00

Speed 1/min : 1350

LOWEST RATED SPEED I

Control-lever

position degrees: 10...18

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 8.0...8.1

Testing:

Speed 1/min : 100

C-rod trav.mm min : 9.50

Speed 1/min : 300

C-rod trav.mm : 8.0...8.1

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1150

C-rod trav.mm : 11.50...11.60

2nd speed 1/min : 650

C-rod trav.mm : 12.60...12.70

3rd speed 1/min : 900

C-rod trav.mm : 12.00...12.30

SWITCH-OVER POINT

Speed 1/min : 220 (250)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650

Del.quantity cm<sup>3</sup>/ : 114.0...116.0

1000H.: (112.0...118.0)

Dispersion cm<sup>3</sup>/ : 5.00

1000H.: (7.00)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MTU 63,3 A  
 Edition : 1.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 406 008 032  
 Injection pump  
 Pump designation : PE8ZWM160/100RS2015  
 EP type number : 0 406 008 032  
 Governor  
 Governor design. : -  
 Governor no. :

Customer-spec. information  
 Customer : MTU

Engine : 16 V 396-03

1st version kW : 1920  
 Speed 1/min: -

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 40...45  
 Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
 assembly : 1 688 901 026

Opening  
 pressure, bar : 220...223

Test inj. tubing : 1 680 750 016

Outside diameter  
 x Wall thickness  
 x Length mm : 8,00x2,00x1500

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2.50...2.60  
 : (-)  
 Contr.-rod trav.mm: 15.0  
 Cam sequence : 8-4-5-6-3-1-2-7

A24

SD ang. spacing°CS: 0-45-90-135-180-225-  
 270-315  
 Tolerance + - ° : 0.5(0.75)

## BASIC SETTING

1st speed 1/mi: 1000  
 -----  
 Contr.-rod trav.mm: 18.00  
 -----  
 Del.quantity cm3/ : 63.0...64.4  
 -----  
 100H.: (62.5...64.9)  
 -----  
 Dispersion cm3/ : 2.0  
 -----  
 100H.: (3.0)  
 -----  
 2nd speed 1/min: 1000  
 Contr.-rod trav. m: 9.00  
 Del.quantity cm3/ : 21.2...24.0  
 100H.: (20.7...24.5)  
 Dispersion cm3/ : 2.8  
 100H.: (4.2)  
 3rd speed 1/min: 350  
 Contr.-rod trav.mm: 9.00  
 Del.quantity cm3/ : 13.2...15.6  
 100H.: (12.7...16.1)  
 Dispersion cm3/ : 1.6  
 100H.: (2.4)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CUM 8,3 A  
Edition : 10.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 083 449  
  
Injection pump  
Pump designation : PES6A100D320/3RS2691  
EP type number : 9 410 230 025  
Governor  
Governor design. : RSV400...1100A2C2209  
R  
Governor no. : 9 420 083 201  
  
Customer-spec. information  
Customer : CUMMINS  
  
Engine : 6 CT 8,3 L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 047  
  
Inlet press., bar : 1.0  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600  
  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.80...2.90  
: (2.75...2.95)  
Contr.-rod trav.mm: 9.0...12.0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + -<sup>o</sup> : 0.50 (0.75)

SD mark cyl. no. : 1

#### START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9.00...12.00  
& c-rod tray max. : 21.00  
Difference<sup>o</sup> CS : 3...4

#### BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10.30...10.40  
-----  
Del.quantity cm<sup>3</sup>/ : 9.0...9.2  
100H.: (8.8...9.4)  
-----  
Dispersion cm<sup>3</sup>/ : 0.35  
100H.: (0.60)  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 5.90...6.10  
Del.quantity cm<sup>3</sup>/ : 1.65...2.05  
100H.: (1.40...2.30)  
Dispersion cm<sup>3</sup>/ : 0.35  
100H.: (0.55)

#### SLEEVE POSITION

Control-lever position  
Degree: 3  
Speed 1/min: 800  
Contr.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 3,75

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm<sup>3</sup>/ : 90.0...92.0  
1000H.: (88.0...94.0)  
Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 35...43

Testing:  
1st c-rod trav.mm : 9.30  
Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4.00  
Speed 1/min : 1170...1200  
4th speed 1/min : 1300  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 16...24  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 5.50

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.0  
Speed 1/min : 400  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 570...6.10

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 10.30...10.40  
2nd speed 1/min : 500  
C-rod trav.mm : 10.30...10.50  
3rd speed 1/min : 400  
C-rod trav.mm : 10.70...11.20

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 74.0...77.0  
1000H.: (71.5...79.5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CUM 8,3 A 1  
Edition : 14.11.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 083 450  
  
Injection pump  
Pump designation : PES6A100D320/3RS2691  
EP type number : 9 410 230 025  
Governor  
Governor design. : RSV375...1150A2C2210  
Governor no. : 9 420 083 202  
  
Customer-spec. information  
Customer : CUMMINS

Engine : 6 C 8,3 L

## TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 047  
  
Inlet press., bar : 1.00  
  
Calibrating nozzle-holder assembly : 0 681 343 009  
  
Opening pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.80...2.90  
                  : (2.75...2.95)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0.5(0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9.00...12.00  
& c-rod trav max. : 21.00  
Difference ° CS : 3...4

## BASIC SETTING

1st speed 1/mi: 1150  
-----  
Contr.-rod trav.mm: 11.10...11.20  
-----  
Del.quantity cm3/ : 9.7...9.9  
-----  
100H.: (9.5...10.1)  
-----  
Dispersion cm3/ : 0.35  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 5.90...6.10  
Del.quantity cm3/ : 1.45...1.85  
100H.: (1.20...2.10)  
Dispersion cm3/ : 0.35  
100H.: (0.55)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 3.25

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1150  
Del.quantity cm3/ : 97.0...99.0  
1000H.: (95.0...101.0)  
Dispersion cm3/ : 3.5  
1000H.: (6.0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 42...50

Testing:  
1st c-rod trav.mm : 10.10  
Speed 1/min : 1190...1200

2nd c-rod trav.mm : 4.00  
Speed 1/min : 1240...1270  
4th speed 1/min : 1400  
C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever  
position degrees: 17...25  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 5.50

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.00  
Speed 1/min : 375  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 570...630

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1150  
C-rod trav.mm : 11.10...11.20  
2nd speed 1/min : 500  
C-rod trav.mm : 11.90...12.00  
3rd speed 1/min : 800  
C-rod trav.mm : 11.40...11.70

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm3/ : 96.0...99.0  
1000H.: (93.5...101.5)  
Speed 1/min : 800  
Del.quantity cm3/ : 100.0...103.0  
1000H.: (97.5...105.5)

Remarks:

: MULLER  
: VALMET  
: MASSEY

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CUM 8,3 B 1  
Edition : 10.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 083 451  
Injection pump  
Pump designation : PES6A100D320/3RS2691  
-2  
EP type number : 9 410 230 028  
Governor  
Governor design. : RQV350...1100AB1218R  
Governor no. : 9 420 080 214

Customer-spec. information  
Customer : CUMMINS

Engine : 6 CT/8,3 L

1st version kW : 154.6  
Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 047

Inlet press., bar : 1.0

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.80...2.90  
: (2.75...2.95)

Contr.-rod trav.mm: 9.00...12.0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.5<sup>o</sup>(0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9.00...12.00  
& c-rod trav max. : 21.0  
Difference<sup>o</sup> CS : 3...4

## BASIC SETTING

1st speed 1/mi: 1000

Contr.-rod trav.mm: 12.8...12.9

Del.quantity cm<sup>3</sup>/ : 11.9...12.1

100H.: (11.7...12.3)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.60)

2nd speed 1/min: 350

Contr.-rod trav. m: 5.90...6.10

Del.quantity cm<sup>3</sup>/ : 1.30...1.70

100H.: (1.05...1.95)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.55)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 350

Sleeve travel mm: 2.2...2.6

2nd speed 1/min: 500

Sleeve travel mm: 3.6...3.9

3rd speed 1/min: 800

Sleeve travel mm: 5.3...5.6

4th speed 1/min: 1150

Sleeve travel mm: 8.5...8.6

## SLEEVE POSITION

Control-lever position

Degree: 1

Speed 1/min: 1140

Cont.-rod travelmm: 15.2...17.8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1000

Charge press. hPa : 800  
Del. quantity cm<sup>3</sup>/ : 119.0...121.0  
1000H.: (117.0...123.0)  
Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 59...67

#### Testing:

1st c-rod trav.mm : 11.80  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1240...1270  
4th speed 1/min : 1370  
C-rod trav.mm : 0...1.0

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 11...19

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9.00  
Speed 1/min : 350  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 630...690

#### CONSTANT REGULATION

Speed 1/min : 350...500

#### TORQUE CONTROL

Dimension a mm : 0.70  
Torque-control curve - 1st version  
1st speed 1/min : 1000  
C-rod trav.mm : 12.80...12.90  
2nd speed 1/min : 700  
C-rod trav.mm : 13.50...13.60  
3rd speed 1/min : 900  
C-rod trav.mm : 13.30...13.50  
4th speed 1/min : 850  
C-rod trav.mm : 13.10...13.30

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 800  
Contr.-rod trav.mm: 13.50...13.60

#### Measurement

Speed 1/min : 500

1st pressure hPa : -11.4  
C-rod trav.mm : 0...11.50

2nd pressure hPa : 575  
C-rod trav.mm : 12.90...13.10  
3rd pressure hPa : 475  
C-rod trav.mm : 12.00...12.20

#### SWITCH-OVER POINT

Speed 1/min : 290(310)

#### FUEL-DELIVERY CHARACTERISTICS

#### 1st version

Charge press. hPa : 800  
Speed 1/min : 700  
Del. quantity cm<sup>3</sup>/ : 125.5...128.5  
1000H.: (123.0...131.0)  
Charge press. hPa : 800  
Speed 1/min : 900  
Del. quantity cm<sup>3</sup>/ : 128.5...131.5  
1000H.: (126.0...134.0)  
Charge press. hPa : -  
Speed 1/min : 500  
Del. quantity cm<sup>3</sup>/ : 86.0...88.0  
1000H.: (84.0...90.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MWM 5,9 F  
Edition : 17.11.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 085 264  
Injection pump  
Pump designation : PES6A90D32ORS2733  
EP type number : 9 400 084 010  
Governor  
Governor design. : RSV350...1250A0B1108  
-2R  
Governor no. : 9 420 083 209  
Customer-spec. information  
Customer : MWM  
Engine : TD 229-6

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 046  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 2.20...2.30  
: (2.15...2.35)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + -<sup>o</sup> : 0.5 (0.75)

SD mark cyl. no. : 1

START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9.00...12.00  
& c-rod tray max. : 21.00  
Difference<sup>o</sup> CS : 4...5

BASIC SETTING

1st speed 1/mi: 1250  
-----  
Contr.-rod trav.mm: 9.40...9.50  
-----  
Del.quantity cm<sup>3</sup>/ : 7.7...7.8  
-----  
100H.: (7.5...8.0)  
-----  
Dispersion cm<sup>3</sup>/ : 0.30  
-----  
100H.: (0.50)  
-----  
2nd speed 1/min: 350  
Contr.-rod trav. m: 6.40...6.60  
Del.quantity cm<sup>3</sup>/ : 0.9...1.3  
100H.: (0.7...1.5)  
Dispersion cm<sup>3</sup>/ : 0.25  
100H.: (0.45)

SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Contr.-rod travelmm: 0.30...1.00

Governor-spring reload  
Notch setting x : 3.5

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1250  
Del.quantity cm<sup>3</sup>/ : 77.0...78.0  
1000H.: (75.0...80.0)  
Dispersion cm<sup>3</sup>/ : 3.0  
1000H.: (5.0)

HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 50...58

Testing:  
1st c-rod trav.mm : 8.40  
Speed 1/min : 1290...1300

B05

2nd c-rod trav.mm : 4.00  
Speed 1/min : 1330...1360  
4th speed 1/min : 1420  
C-rod trav.mm : 0.30...1.70

LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 6.00

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.0  
Speed 1/min : 350  
C-rod trav.mm : 6.40...6.60  
C-rod trav.mm : 2.00  
Speed 1/min : 410...470

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1250  
C-rod trav.mm : 9.40...9.50  
2nd speed 1/min : 500  
C-rod trav.mm : 9.40...9.60  
3rd speed 1/min : 400  
C-rod trav.mm : 10.70...11.30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 56.0...58.0  
1000H.: (53.5...60.5)

Remarks:  
APPLICATION

Combine-harvester



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MWM 5,9 E  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 085 273  
 Injection pump  
 Pump designation : PES6A90D32ORS2718  
 EP type number : 9 400 084 003  
 Governor  
 Governor design. : RSV350...1500A0B2207  
 -1R  
 Governor no. : 9 420 083 211

Customer-spec. information  
 Customer : MWM

Engine : TD 229-6

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 143 046

Inlet press., bar : 1.0

Calibrating nozzle-holder assembly : 0 681 343 009

Opening pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter x Wall thickness x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values -----

**START OF DELIVERY**

Test pressure, bar: 1,0  
 Prestroke mm : 2,65...2,75  
 : (2,60...2,80)  
 Contr.-rod trav.mm: 9,0...12,0  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

**START OF DELIVERY DIFFERENCE**

betw.c-rod trav.mm: 9,0-12,0  
 Difference ° CS : 4,0...5,0

**BASIC SETTING**

1st speed 1/mi: 1500  
 -----  
 Contr.-rod trav.mm: 10,9...11,0  
 -----  
 Del.quantity cm3/ : 8,3...8,4  
 -----  
 100H.: (8,1...8,6)  
 -----  
 Dispersion cm3/ : 0,3  
 -----  
 100H.: (0,5)  
 -----

2nd speed 1/min: 350  
 Contr.-rod trav. m: 5,9...6,1  
 Del.quantity cm3/ : 1,0...1,4  
 100H.: (0,8...1,6)  
 Dispersion cm3/ : 0,25  
 100H.: (0,45)

**SLEEVE POSITION**

Control-lever position  
 Degree: LOSE  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
 Notch setting x : 3,5

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1500  
 Del.quantity cm3/ : 83,0...84,0  
 1000H.: (81,0...86,0)  
 Dispersion cm3/ : 3,0  
 1000H.: (5,0)

**HIGHEST RATED SPEED**

Testing:  
 1st c-rod trav.mm : 9,9  
 Speed 1/min : 1540...1550  
 2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1600...1630  
 4th speed 1/min : 1700  
 C-rod trav.mm : 0,3...1,7

LOWEST RATED SPEED I

Control-lever

position degrees: 18...26

Setting point w/out aux. spring

Speed 1/min : 350

Contr.-rod trav.mm: 5,4...5,6

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 350

C-rod trav.mm : 5,9...6,1

C-rod trav.mm : 2,0

Speed 1/min : 430...490

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1500

C-rod trav.mm : 10,9...11,0

2nd speed 1/min : 500

C-rod trav. : 10,9...11,1

3rd speed 1 n : 400

C-rod trav.mm : 12,1...12,7

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm3/ : 70,0...72,0

1000H.: (67,5...74,5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MWM 5,9 E  
 Edition : 17.11.86  
 Superceeded : 7.86  
 Calibrating oil : ISO-4113

Combination no. : 9 400 085 285

Injection pump  
 Pump designation : PES6A90D32ORS2727  
 EP type number : 9 400 084 007  
 Governor  
 Governor design. : RSV350...1250A0B1108  
 -3R  
 Governer no. : 9 420 083 223

Customer-spec. information  
 Customer : MWM

Engine : D229-6

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 046

Inlet press., bar : 1.0

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.70...2.80  
 : (2.65...2.85)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + -<sup>o</sup> : 0.5(0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9.00...12.00  
 & c-rod tray max. : 21.00  
 Difference<sup>o</sup> CS : 3...4

## BASIC SETTING

1st speed 1/mi: 1200  
 -----  
 Contr.-rod trav.mm: 9.10...9.20  
 -----  
 Del.quantity cm3/ : 62.5...63.5  
 -----  
 100H.: (60.5...65.5)  
 -----  
 Dispersion cm3/ : 3.0  
 -----  
 100H.: (5.0)  
 -----  
 2nd speed 1/min: 350  
 Contr.-rod trav. m: 5.90...6.10  
 Del.quantity cm3/ : 1.1...1.5  
 100H.: (0.9...1.7)  
 Dispersion cm3/ : 0.25  
 100H.: (0.45)

## SLEEVE POSITION

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
 Notch setting x : 4.0

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1200  
 Del.quantity cm3/ : 62.5...63.5  
 1000H.: (60.5...65.5)  
 Dispersion cm3/ : 3.0  
 1000H.: (5.0)

## HIGHEST RATED SPEED

1st version  
 Control-lever  
 position degrees: 50...58

Testing:  
 1st c-rod trav.mm : 8.10  
 Speed 1/min : 1240...1250

2nd c-rod trav.mm : 4.00  
Speed 1/min : 1300...1330  
4th speed 1/min : 1450  
C-rod trav.mm : 0.30...1.70

LOWEST RATED SPEED I

Control-lever  
position degrees: 25...33  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 5.50

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.00  
Speed 1/min : 350  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 510...570

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1200  
C-rod trav.mm : 9.10...9.20  
2nd speed 1/min : 500  
C-rod trav.mm : 9.60...9.70  
3rd speed 1/min : 800  
C-rod trav.mm : 9.30...9.60

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm3/ : 52.0...54.0  
1000H.: (49.5...56.5)  
Speed 1/min : 800  
Del.quantity cm3/ : 59.5...61.5  
1000H.: (57.0...64.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 5,7 M 1  
Edition : 17.11.86  
Superceeded : -  
Calibrating oil : IS-4113  
Combination no. : 9 400 085 290  
Injection pump  
Pump designation : PES6A80D410RS2085Y  
EP type number : 0 410 886 044  
Governor  
Governor design. : RSV350...1300A2B713-  
1L  
Governor no. : 9 420 083 226  
Customer-spec. information  
Customer : DAIMLER-BENZ  
Engine : OM 352  
1st version kW : 88.0  
Speed 1/min: 2600

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 047  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 38...42  
Prestroke mm : 2.15...2.25  
: (2.10...2.30)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0.5(0.75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1300  
-----  
Contr.-rod trav.mm: 10.40...10.50  
-----  
Del.quantity cm3/ : 6.4...6.5  
-----  
100H.: (6.25...6.65)  
-----  
Dispersion cm3/ : 0.25  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 350  
Contr.-rod trav. m: 7.40...7.60  
Del.quantity cm3/ : 1.25...1.55  
100H.: (1.1...1.7)  
Dispersion cm3/ : 0.2  
100H.: (0.35)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
Notch setting x : 4.25

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1300  
Del.quantity cm3/ : 64.0...65.0  
1000H.: (62.5...66.5)  
Dispersion cm3/ : 2.5  
1000H.: (4.0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 44...52

## Testing:

1st c-rod trav.mm : 9.40  
Speed 1/min : 1340...1350  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1390...1420  
4th speed 1/min : 1550

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 16...24

Setting point w/out aux. spring

Speed 1/min : 350

Contr.-rod trav.mm: 7.00

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.00

Speed 1/min : 350

C-rod trav.mm : 7.40...7.60

C-rod trav.mm : 2.00

Speed 1/min : 650...710

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1300

C-rod trav.mm : 10.40...10.50

2nd speed 1/min : 500

C-rod trav.mm : 10.70...10.80

3rd speed 1/min : 800

C-rod trav.mm : 10.50...10.70

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm3/ : 52.0...55.0

1000H.: (50.5...56.5)

Speed 1/min : 800

Del.quantity cm3/ : 55.0...58.0

1000H.: (53.5...59.5)

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 7,8 A
Edition : 15.12.86
Superceeded : 10.85
Calibrating oil : ISO-4113
Combination no. : 9 400 087 335
Injection pump
Pump designation : PES6P110A720RS3150
EP type number : 9 400 087 046
Governor
Governor design. : RQV350...1300PA776
Governor no. : 9 420 080 210

Customer-spec. information
Customer : FORD (FTO)

Engine : 7,8 L - TC
1st version kW : 176.6
Speed 1/min: 2600

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42
Overflow valve : 1 417 413 025
Inlet press., bar : 1.5
Calibrating nozzle-holder assembly : 1 688 901 017
Opening pressure, bar : 207...210
Perforated-plate diameter mm : 0,6
Test inj. tubing : 1 680 750 015
Outside diameter x Wall thickness x Length mm : 6,00X1,50X600

(A) Injection pump setting values
Insp. values in parentheses
Set constant delivery quant. per values -----

START OF DELIVERY
Test pressure, bar: 25...27

Prestroke mm : 4,25...4,35
(4,20...4,40)
Contr.-rod trav.mm: 9,00-12,00
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9,0...12,0
& c-rod trav max. : 21
Difference ° CS : 2,0...3,0

BASIC SETTING

1st speed 1/mi: 1300
Contr.-rod trav.mm: 13,6...13,7
Del.quantity cm3/ : 13,9...14,1
100H.: (13,7...14,3)
Dispersion cm3/ : 0,5
100H.: (0,9)
2nd speed 1/min: 350
Contr.-rod trav. m: 7,4...7,6
Del.quantity cm3/ : 1,5...1,9
100H.: (1,25...2,15)
Dispersion cm3/ : 0,35
100H.: (0,55)

(B) Setting of injection pump with externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 350
Sleeve travel mm: 0,6...1,3
2nd speed 1/min: 500
Sleeve travel mm: 2,3...2,7
3rd speed 1/min: 800
Sleeve travel mm: 4,0...4,3
4th speed 1/min: 1000
Sleeve travel mm: 5,0...5,3
5th speed 1/min: 1300
Sleeve travel mm: 7,2...7,3

SLEEVE POSITION

Control-lever position
Degree: MAX.
Speed 1/min: 1350
Cont.-rod travelmm: 15,2...17,8

### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min : 1300  
Charge press. hPa : 600  
Del. quantity cm<sup>3</sup>/ : 139,0...141,0  
1000H.: (137,0...143,0)  
Dispersion cm<sup>3</sup>/ : 5,0  
1000H.: (9,0)

### HIGHEST RATED SPEED

1st version

Control-lever  
position degrees: 61...69

Testing:

1st c-rod trav.mm : 12,6  
Speed 1/min : 1360...1370  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1500...1530  
4th speed 1/min : 1620  
C-rod trav.mm : 0...1,0

### LOWEST RATED SPEED I

Control-lever

position degrees: 11...19

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9,0  
Speed 1/min : 350  
C-rod trav.mm : 7,4...7,6  
C-rod trav.mm : 2,0  
Speed 1/min : 620...680

### CONSTANT REGULATION

Speed 1/min : 370...440

### TORQUE CONTROL

Dimension a mm : ?

Torque-control curve - 1st version

1st speed 1/min : 1300  
C-rod trav.mm : 13,6...13,7  
2nd speed 1/min : 800  
C-rod trav.mm : 14,2...14,3  
3rd speed 1/min : 1000  
C-rod trav.mm : 14,05...14,15  
4th speed 1/min : 1050  
C-rod trav.mm : 13,75...13,95

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 600  
Contr.-rod trav.mm: 14,2...14,3

Measurement

B13

Speed 1/min : 500

1st pressure hPa : -  
C-rod trav.mm : 13,5...13,6  
2nd pressure hPa : 420  
C-rod trav.mm : 13,7...13,8  
3rd pressure hPa : 475  
C-rod trav.mm : 13,9...14,1

### SWITCH-OVER POINT

Speed 1/min : 290(310)

### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 800  
Del. quantity cm<sup>3</sup>/ : 125,0...129,0  
1000H.: (123,0...131,0)  
Dispersion cm<sup>3</sup>/ : -  
1000H.: -  
Charge press. hPa : 600  
Speed 1/min : 1000  
Del. quantity cm<sup>3</sup>/ : 135,0...139,00  
1000H.: (133,0...141,0)  
Dispersion cm<sup>3</sup>/ : -  
1000H.: -  
Charge press. hPa : -  
Speed 1/min : 500  
Del. quantity cm<sup>3</sup>/ : 99,0...101,0  
1000H.: (96,0...104,0)  
Dispersion cm<sup>3</sup>/ : -  
1000H.: -

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 7,8 A 2  
Edition : 15.12.86  
Superleeded : 6.86  
Calibrating oil : ISO-4113

Combination no. : 9 400 087 336

Injection pump  
Pump designation : PES6P110A72ORS3150  
EP type number : 9 400 087 336  
Governor  
Governor design. : RQV350...1300PA776-2  
Governor no. : 9 420 080 213

Customer-spec. information  
Customer : FORD (FTO)

Engine : 7,8 L-TC

1st version kW : 154.6  
Speed 1/min: 2600

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27

Prestroke mm : 4,25...4,35  
                  : (4,20...4,40)  
Contr.-rod trav.mm: 9,0...12,0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-24-0300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

#### START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9,0...12,0  
& c-rod trav max. : 21,0  
Difference<sup>o</sup> CS : 2,0...3,0

#### BASIC SETTING

1st speed 1/mi: 1300  
-----

Contr.-rod trav.mm: 12,3...12,4  
-----

Del.quantity cm<sup>3</sup>/ : 12,6...12,8  
-----  
100H.: (12,4...13,0)  
-----

Dispersion cm<sup>3</sup>/ : 0,5  
-----  
100H.: (0,9)  
-----

2nd speed 1/min: 350  
Contr.-rod trav. m: 7,6...7,8  
Del.quantity cm<sup>3</sup>/ : 2,3...2,7  
100H.: (2,05...2,95)  
Dispersion cm<sup>3</sup>/ : 0,35  
100H.: (0,55)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 0,6...1,3  
2nd speed 1/min: 500  
Sleeve travel mm: 2,3...2,7  
3rd speed 1/min: 800  
Sleeve travel mm: 4,0...4,3  
4th speed 1/min: 1000  
Sleeve travel mm: 5,0...5,3  
5th speed 1/min: 1700  
Sleeve travel mm: 7,2...7,3

#### SLEEVE POSITION

Control-lever position  
Degree: MAX.  
Speed 1/min: 1350  
Cont.-rod travelmm: 15,2...17,8

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1300  
Charge press. hPa : 550  
Del.quantity cm<sup>3</sup>/ : 126,0...128,0  
1000H.: (124,0...130,0)  
Dispersion cm<sup>3</sup>/ : 5,0  
1000H.: (9,0)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 58...66

#### Testing:

1st c-rod trav.mm : 11,3  
Speed 1/min : 1360...1370  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1470...1500  
4th speed 1/min : 1620  
C-rod trav.mm : 0...1,0

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 12...20

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9,5  
Speed 1/min : 350  
C-rod trav.mm : 7,6...7,8  
C-rod trav.mm : 2,0  
Speed 1/min : 590...650

#### CONSTANT REGULATION

Speed 1/min : 370...440

#### TORQUE CONTROL

Dimension a mm : ?  
Torque-control curve - 1st version  
1st speed 1/min : 1300  
C-rod trav.mm : 12,3...12,4  
2nd speed 1/min : 800  
C-rod trav.mm : 12,6...12,7  
3rd speed 1/min : 1050  
C-rod trav.mm : 12,45...12,55  
4th speed 1/min : 1000  
C-rod trav.mm : 12,5...12,7

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 550  
Contr.-rod trav.mm: 12,6...12,7

#### Measurement

Speed 1/min : 500

1st pressure hPa : -  
C-rod trav.mm : 12,3...12,4  
2nd pressure hPa : 420  
C-rod trav.mm : 12,4...12,5  
3rd pressure hPa : 370  
C-rod trav.mm : 12,3...12,4

SWITCH-OVER POINT

Speed 1/min : 290(310)

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 550  
Speed 1/min : 800  
Del.quantity cm3/ : 105,0...109,0  
1000H.: (103,0...111,0)

Dispersion cm3/ : -  
1000H.: -

Charge press. hPa : 550  
Speed 1/min : 1000  
Del.quantity cm3/ : 118,0...122,0  
1000H.: (116,0...124,0)

Dispersion cm3/ : -  
1000H.: -

Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 77,0...79,0  
1000H.: (74,0...82,0)

Dispersion cm3/ : -  
1000H.: -

Remarks:

## BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 7,8 A 1  
Edition : 15.12.86  
Superceeded : 12.85  
Calibrating oil : ISO-4113

Combination no. : 9 400 087 337

Injection pump  
Pump designation : PES6P110A72ORS3150  
EP type number : 9 400 087 046  
Governor  
Governor design. : RQV350...1300PA776-1  
Governor no. : 9 420 080 212

Customer-spec. information  
Customer : FORD (FT0)

Engine : 7,8 L-TC

1st version kW : 136.2  
Speed 1/min: 2600

### TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

### START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 4,25...4,35  
                  : (4,20...4,40)  
Contr.-rod trav.mm: 9,0...12,0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

#### START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9,0...12,0  
& c-rod tray max. : 21,0  
Difference<sup>o</sup> CS : 2,0...3,0

#### BASIC SETTING

1st speed 1/mi: 1300  
-----  
Contr.-rod trav.mm: 12,0...12,1  
-----  
Del.quantity cm<sup>3</sup>/ : 12,3...12,5  
-----  
100H.: (12,1...12,7)  
-----  
Dispersion cm<sup>3</sup>/ : 0,5  
-----  
100H.: (0,9)  
-----  
2nd speed 1/min: 3500  
Contr.-rod trav. m: 7,4...7,6  
Del.quantity cm<sup>3</sup>/ : 2,1...2,5  
100H.: (1,85...2,75)  
Dispersion cm<sup>3</sup>/ : 0,35  
100H.: (0,55)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 0,6...1,3  
2nd speed 1/min: 500  
Sleeve travel mm: 2,3...2,7  
3rd speed 1/min: 800  
Sleeve travel mm: 4,0...4,3  
4th speed 1/min: 1000  
Sleeve travel mm: 5,0...5,3  
5th speed 1/min: 1300  
Sleeve travel mm: 7,2...7,3

#### SLEEVE POSITION

Control-lever position  
Degree: MAX.  
Speed 1/min: 1350  
Cont.-rod travelmm: 15,2...17,8

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1300  
Charge press. hPa : 600  
Del.quantity cm<sup>3</sup>/ : 123,0...125,0  
1000H.: (121,0...127,0)  
Dispersion cm<sup>3</sup>/ : 5,0  
1000H.: (9,0)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 58...66

#### Testing:

1st c-rod trav.mm : 11,0  
Speed 1/min : 1360...1370  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1470...1500  
4th speed 1/min : 1600  
C-rod trav.mm : 0...1,0

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 11...19

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9,5  
Speed 1/min : 350  
C-rod trav.mm : 7,4...7,6  
C-rod trav.mm : 2,0  
Speed 1/min : 630...690

#### CONSTANT REGULATION

Speed 1/min : 370...440

#### TORQUE CONTROL

Dimension a mm : ?  
Torque-control curve - 1st version  
1st speed 1/min : 1300  
C-rod trav.mm : 12,0...12,1  
2nd speed 1/min : 800  
C-rod trav.mm : 12,3...12,4  
3rd speed 1/min : 900  
C-rod trav.mm : 12,3...12,4  
4th speed 1/min : 1015  
C-rod trav.mm : 12,15...12,25

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 600  
Contr.-rod trav.mm: 12,3...12,4

#### Measurement

Speed 1/min : 500

1st pressure hPa : -  
C-rod trav.mm : 11,3...11,4  
2nd pressure hPa : 245  
C-rod trav.mm : 11,6...11,7  
3rd pressure hPa : 335  
C-rod trav.mm : 12,0...12,2

SWITCH-OVER POINT

Speed 1/min : 290 (310)

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 800  
Del.quantity cm<sup>3</sup>/ : 101.0...105.0  
1000H.: (99.0...107.0)

Dispersion cm<sup>3</sup>/ : -  
1000H.: -

Charge press. hPa : 600  
Speed 1/min : 900  
Del.quantity cm<sup>3</sup>/ : 107,5...111,5  
1000H.: (105,5...113,5)

Dispersion cm<sup>3</sup>/ : -  
1000H.: -

Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 69,5...71,5  
1000H.: (66,5...74,5)

Dispersion cm<sup>3</sup>/ : -  
1000H.: -

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAT 7,0 A4  
Edition : 9.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 087 351  
Injection pump  
Pump designation : PES4P80A720LS440  
EP type number : 9 400 087 351  
Governor  
Governor design. : RQV350...950PA609-3  
Governor no. : 9 420 080 198

Customer-spec. information  
Customer : CATERPILLAR

Engine : 3304 PC

1st version kW : 55  
Speed 1/min: 1900

TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 861 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1,95...2,05  
: (1,90...2,10)  
Contr.-rod trav.mm: 9,0...12,0

Cam sequence : 1-3-4-2

SD ang. spacing<sup>0</sup>CS: 0-90-180-270  
Tolerance + -<sup>0</sup> : 0,5 (0,75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 950

Contr.-rod trav.mm: 11,30...11,40

Del.quantity cm<sup>3</sup>/ : 8,65...8,75

100H.: (8,50...8,90)

Dispersion cm<sup>3</sup>/ : 0,25

100H.: (0,40)

2nd speed 1/min: 350

Contr.-rod trav. m: 6,7...6,9

Del.quantity cm<sup>3</sup>/ : 0,85...1,55

100H.: (0,65...1,75)

Dispersion cm<sup>3</sup>/ : 0,20

100H.: (0,35)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 325

Sleeve travel mm: 0,5...2,0

2nd speed 1/min: 400

Sleeve travel mm: 2,7...3,1

3rd speed 1/min: 500

Sleeve travel mm: 3,5...4,2

4th speed 1/min: 800

Sleeve travel mm: 6,1...6,6

5th speed 1/min: 1010

Sleeve travel mm: 8,4...8,6

#### SLEEVE POSITION

Control-lever position

Degree: MAX.

Speed 1/min: 1010

Contr.-rod travelmm: 15,2...17,8

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 950

Del.quantity cm<sup>3</sup>/ : 86,5...87,5

1000H.: (85,0...89,0)

Dispersion cm<sup>3</sup>/ : 2,5

1000H.: (4,0)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 62...71

Testing:

1st c-rod trav.mm : 10,3

Speed 1/min : 980...990

2nd c-rod trav.mm : 4,0

Speed 1/min : 1040...1070

4th speed 1/min : 1150

C-rod trav.mm : 0...1,0

#### LOWEST RATED SPEED I

Control-lever

position degrees: 13...21

Testing:

Speed 1/min : 100

C-rod trav.mm min : 11,0

Speed 1/min : 350

C-rod trav.mm : 6,3...6,5

C-rod trav.mm : 2,0

Speed 1/min : 540...600

#### CONSTANT REGULATION

Speed 1/min : 300...400

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 950

C-rod trav.mm : 11,3...11,4

2nd speed 1/min : 500

C-rod trav.mm : 12,2...12,3

3rd speed 1/min : 700

C-rod trav.mm : 12,1...12,3

4th speed 1/min : 800

C-rod trav.mm : 11,7...12,0

#### SWITCH-OVER POINT

Speed 1/min : 290 (310)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm<sup>3</sup>/ : 93,0...95,0

1000H.: (92,0...96,0)

Dispersion cm<sup>3</sup>/ : -

1000H.: -

Speed 1/min : 700

Del.quantity cm<sup>3</sup>/ : 95,5...97,5

1000H.: (94,5...98,5)

Dispersion cm<sup>3</sup>/ : -

1000H.: -

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAT 7,0 A5  
 Edition : 09.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 087 352  
 Injection pump  
 Pump designation : PES4P80A720LS440  
 EP type number : 9 400 087 028  
 Governor  
 Governor design. : RQV350...1000PA613-3  
 Governer no. : 9 420 080 217

Customer-spec. information  
 Customer : CATERPILLAR

Engine : 3304

1st version kW : 55  
 Speed 1/min: 2000

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 1,95...2,05  
 : (1,90...2,10)  
 Contr.-rod trav.mm: 9,0...12,0  
 Cam sequence : 1-3-4-2

B23

SD ang. spacing°CS: 0-90-180-270  
 Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1000  
 -----  
 Contr.-rod trav.mm: 11,0...11,1  
 -----  
 Del.quantity cm3/ : 8,35...8,45  
 -----  
 100H.: (8,20...8,60)  
 -----  
 Dispersion cm3/ : 0,25  
 -----  
 100H.: (0,40)  
 -----  
 2nd speed 1/min: 350  
 Contr.-rod trav. m: 6,7...6,9  
 Del.quantity cm3/ : 0,85...1,55  
 100H.: (0,65...1,75)  
 Dispersion cm3/ : 0,20  
 100H.: (0,35)

(B) Setting of injection pump with  
 externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 325  
 Sleeve travel mm: 0,5...2,0  
 2nd speed 1/min: 400  
 Sleeve travel mm: 2,7...3,1  
 3rd speed 1/min: 500  
 Sleeve travel mm: 3,5...4,2  
 4th speed 1/min: 800  
 Sleeve travel mm: 6,1...6,6  
 5th speed 1/min: 1010  
 Sleeve travel mm: 8,4...8,6

## SLEEVE POSITION

Control-lever position  
 Degree: MAX.  
 Speed 1/min: 1010  
 Cont.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1000  
 Del.quantity cm3/ : 83,5...84,5  
 1000H.: (82,0...86,0)  
 Dispersion cm3/ : 2,5  
 1000H.: (4,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 65...74

Testing:  
1st c-rod trav.mm : 10,0  
Speed 1/min : 1030...1040  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1090...1120  
4th speed 1/min : 1170  
C-rod trav.mm : 0...1,0

LOWEST RATED SPEED I  
Control-lever  
position degrees: 13...21

Testing:  
Speed 1/min : 250  
C-rod trav.mm min : 11,0  
Speed 1/min : 350  
C-rod trav.mm : 6,5...6,7  
C-rod trav.mm : 2,0  
Speed 1/min : 550...610

CONSTANT REGULATION  
Speed 1/min : 300...400

TORQUE CONTROL  
Torque-control curve - 1st version  
1st speed 1/min : 1000  
C-rod trav.mm : 11,0...11,1  
2nd speed 1/min : 500  
C-rod trav.mm : 11,5...11,6  
3rd speed 1/min : 700  
C-rod trav.mm : 11,4...11,6  
4th speed 1/min : 800  
C-rod trav.mm : 11,2...11,5

SWITCH-OVER POINT  
Speed 1/min : 290 (310)

FUEL-DELIVERY CHARACTERISTICS  
Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 80,0...82,0  
1000H.: (79,0...83,0)  
Dispersion cm<sup>3</sup>/ : -  
1000H.: -  
Speed 1/min : 700  
Del.quantity cm<sup>3</sup>/ : 87,0...89,0  
1000H.: (86,0...90,0)  
Dispersion cm<sup>3</sup>/ : -  
1000H.: -

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 6,6 D  
Edition : 15.12.86  
Superceeded : 2.86  
Calibrating oil : ISO-4113  
Combination no. : 9 400 087 353  
Injection pump  
Pump designation : PES6P110A72ORS3157  
EP type number : 9 400 087 048  
Governor  
Governor design. : RQV350...1300PA788  
Governor no. : 9 4200 080 215

## Customer-spec. information

1st version kW : 125,1  
Speed 1/min: 2600

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 025  
Inlet press., bar : 1.5  
Calibrating nozzle-holder  
assembly : 1 688 901 017  
Opening  
pressure, bar : 207...210  
Perforated-plate  
diameter mm : 0,6  
Test inj. tubing : 1 680 750 015  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 4,25...4,35  
                  : (4,20...4,40)  
Contr.-rod trav.mm: 9,0...12,0

Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1300  
-----  
Contr.-rod trav.mm: 13,0...13,1  
-----  
Del. quantity cm<sup>3</sup>/ : 12,5...12,7  
-----  
100H.: (12,3...12,9)  
-----  
Dispersion cm<sup>3</sup>/ : 0,50  
-----  
100H.: (0,75)  
-----

2nd speed 1/min: 350  
Contr.-rod trav. m: 7,9...8,1  
Del. quantity cm<sup>3</sup>/ : 1,9...2,3  
100H.: (1,65...2,55)  
Dispersion cm<sup>3</sup>/ : 0,35  
100H.: (0,55)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 0,6...1,3  
2nd speed 1/min: 500  
Sleeve travel mm: 2,3...2,7  
3rd speed 1/min: 800  
Sleeve travel mm: 4,0...4,3  
4th speed 1/min: 1000  
Sleeve travel mm: 5,0...5,3  
5th speed 1/min: 1300  
Sleeve travel mm: 7,2...7,3

## SLEEVE POSITION

Control-lever position  
Degree: MAX.  
Speed 1/min: 1350  
Cont.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1300  
Charge press. hPa : 900  
Del. quantity cm<sup>3</sup>/ : 125,0...127,0  
1000H.: (123,0...129,0)  
Dispersion cm<sup>3</sup>/ : 5,0  
1000H.: (9,0)

### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 60...68

#### Testing:

1st c-rod trav.mm : 12,0

Speed 1/min : 1360...1370

2nd c-rod trav.mm : 4,0

Speed 1/min : 1490...1520

4th speed 1/min : 1620

C-rod trav.mm : 0...1,0

### LOWEST RATED SPEED I

Control-lever

position degrees: 11...19

#### Testing:

Speed 1/min : 100

C-rod trav.mm min : 9,5

Speed 1/min : 350

C-rod trav.mm : 7,9...8,1

C-rod trav.mm : 2,0

Speed 1/min : 620...680

### CONSTANT REGULATION

Speed 1/min : 370...440

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 900

Contr.-rod trav.mm: 13,0...13,1

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 11,4...11,5

2nd pressure hPa : 650

C-rod trav.mm : 12,4...12,6

3rd pressure hPa : 530

C-rod trav.mm : 11,8...11,9

### SWITCH-OVER POINT

Speed 1/min : 290 (310)

### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 900

Speed 1/min : 800

Del.quantity cm3/ : 99.0...103.0

1000H.: (97.0...105.0)

Dispersion cm3/ : -

1000H.: -

Charge press. hPa : -

Speed 1/min : 500

Del.quantity cm3/ : 60,0...62,0

1000H.: (57,0...65,0)

Dispersion cm3/ : -

1000H.: -

Remarks:

## BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 6,6 E  
Edition : 15.12.86  
Superceeded : 2.86  
Calibrating oil : ISO-4113

Combination no. : 9 400 087 354

Injection pump  
Pump designation : PES6P110A720RS3158  
EP type number : 9 400 087 049  
Governor  
Governor design. : RQV350...1300PA787  
Governor no. : 9 420 080 218

Customer-spec. information  
Customer : FORD (FTO)

Engine : 6,6 L - TC

1st version kW : 129.2  
Speed 1/min: 2600

### TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27

Prestroke mm : 4,25...4,35  
                  : (4,20...4,40)  
Contr.-rod trav.mm: 9,0...12,0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + -<sup>o</sup> : 0,5 (0,75)

SD mark cyl. no. : 1

#### START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9,0...12,0  
& c-rod tray max. : 21,0  
Difference<sup>o</sup> CS : 3,5...4,5

#### BASIC SETTING

1st speed 1/mi: 1300

Contr.-rod trav.mm: 11,6...1,7

Del.quantity cm3/ : 11,25...11,45  
100H.: (11,05...11,65)

Dispersion cm3/ : 0,5  
100H.: (0,9)

2nd speed 1/min: 350  
Contr.-rod trav. m: 7,7...7,9  
Del.quantity cm3/ : 2,0...2,4  
100H.: (1,75...2,65)  
Dispersion cm3/ : 0,35  
100H.: (0,55)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 0,6...1,3  
2nd speed 1/min: 500  
Sleeve travel mm: 2,3...2,7  
3rd speed 1/min: 800  
Sleeve travel mm: 4,0...4,3  
4th speed 1/min: 1000  
Sleeve travel mm: 5,0...5,3  
5th speed 1/min: 1300  
Sleeve travel mm: 7,2...7,3

#### SLEEVE POSITION

Control-lever position  
Degree: MAX.  
Speed 1/min: 1350  
Cont.-rod travelmm: 15,2...17,8

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1300  
Del.quantity cm3/ : 112,5...114,5  
1000H.: (110,5...116,5)  
Dispersion cm3/ : 5,0  
1000H.: (9,0)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 58...66

#### Testing:

1st c-rod trav.mm : 10,6  
Speed 1/min : 1360...1370  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1470...1500  
4th speed 1/min : 1600  
C-rod trav.mm : 0...1,0

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 11...19

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9,5  
Speed 1/min : 350  
C-rod trav.mm : 7,7...7,9  
C-rod trav.mm : 2,0  
Speed 1/min : 690...750

#### CONSTANT REGULATION

Speed 1/min : 370...440

#### TORQUE CONTROL

Dimension a mm : ?  
Torque-control curve - 1st version  
1st speed 1/min : 1300  
C-rod trav.mm : 11,6...11,7  
2nd speed 1/min : 800  
C-rod trav.mm : 12,1...12,2  
3rd speed 1/min : 900  
C-rod trav.mm : 12,0...12,2  
4th speed 1/min : 1050  
C-rod trav.mm : 11,85...11,90

#### SWITCH-OVER POINT

Speed 1/min : 290 (310)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm3/ : 95,5...99,5  
1000H.: (93,5...101,5)  
Dispersion cm3/ : -  
1000H.: -  
Speed 1/min : 900

Del. quantity cm3/ : 101,0...106,0  
1000H.: (99,0...108,0)  
Dispersion cm3/ : -  
1000H.: -

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAT 7,0 E  
Edition : 17.11.86  
Superceeded : -  
Calibrating oil : ISO-4113

Combination no. : 9 400 087 362

Injection pump  
Pump designation : PES4P100A720LS501  
EP type number : 9 400 087 051  
Governor  
Governor design. : RQV350...1100PA828  
Governor no. : 9 420 080 232

Customer-spec. information  
Customer : CATERPILLAR

Engine : 3304 DIT

1st version kW : 81.3  
Speed 1/min: 2200

TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 401 087 214

Inlet press., bar : 2.0

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 008

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00,600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27



Prestroke mm : 3.95...4.05  
                  : (3.90...4.10)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-3-4-2

SD ang. spacing<sup>o</sup>CS: 0-90-180-270  
Tolerance + - : 0.5 (0.75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10.60...10.70

Del.quantity cm<sup>3</sup>/ : 13.1...13.2

100H.: (12.9...13.4)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.6)

2nd speed 1/min: 350

Contr.-rod trav. m: 6.40...6.60

Del.quantity cm<sup>3</sup>/ : 1.5...1.9

100H.: (1.25...2.15)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.55)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 1.30...1.50

2nd speed 1/min: 500  
Sleeve travel mm: 2.90...3.20

3rd speed 1/min: 700  
Sleeve travel mm: 4.50...4.80

4th speed 1/min: 900  
Sleeve travel mm: 6.00...6.20

5th speed 1/min: 1150  
Sleeve travel mm: 8.50...8.60

#### SLEEVE POSITION

Control-lever position  
Degree: -1

Speed 1/min: 1150  
Cont.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 600

C03

Del.quantity cm<sup>3</sup>/ : 131.0...132.0  
1000H.: (129.0...134.0)

Dispersion cm<sup>3</sup>/ : 3.5  
1000H.: (6.0)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 61...69

#### Testing:

1st c-rod trav.mm : 9.60  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1200...1230  
4th speed 1/min : 1350  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 9...17

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 8.00  
Speed 1/min : 350  
C-rod trav.mm : 5.10...5.30  
C-rod trav.mm : 2.00  
Speed 1/min : 530...590

#### CONSTANT REGULATION

Speed 1/min : 370...440

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 600  
Contr.-rod trav.mm: 10.60...10.70

#### Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 8.70...8.80  
2nd pressure hPa : 310  
C-rod trav.mm : 10.10...10.20  
3rd pressure hPa : 210  
C-rod trav.mm : 9.10...9.30

#### SWITCH-OVER POINT

Speed 1/min : 270 (310)

#### FUEL-DELIVERY CHARACTERISTICS

1st version  
Charge press. hPa : 600  
Speed 1/min : 700

Del.quantity cm3/ : 123.0...127.0  
1000H.: (121.0...129.0)  
Charge press. hPa : -  
Speed 1/min : 1100  
Del.quantity cm3/ : 90.0...92.0  
1000H.: (88.0...94.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAT 10,5 G2  
Edition : 3.12.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 087 363  
  
Injection pump  
Pump designation : PES6P100A720LS502  
EP type number : 9 400 087 050  
Governor  
Governor design. : RQV350...1100PA828  
Governor no. : 9 420 080 232

Customer-spec. information  
Customer : CATERPILLAR

Engine : 3306 DITA

1st version kW : 135.0  
Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 401 087 348

Inlet press., bar : 2.0

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 008

Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Test pressure, bar: 25...27





Prestroke mm : 3.95...4.05  
                  : (3.90...4.10)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.5(0.75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 12.90...13.00

Del.quantity cm<sup>3</sup>/ : 15.3...15.5

100H.: (15.1...15.7)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.6)

2nd speed 1/min: 350

Contr.-rod trav. m: 6.40...6.60

Del.quantity cm<sup>3</sup>/ : 1.3...1.7

100H.: (1.05...1.95)

Dispersion cm<sup>3</sup>/ : 0.35

100H.: (0.55)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 350

Sleeve travel mm: 1.30...1.50

2nd speed 1/min: 500

Sleeve travel mm: 2.90...3.20

3rd speed 1/min: 700

Sleeve travel mm: 4.50...4.80

4th speed 1/min: 900

Sleeve travel mm: 6.00...6.20

5th speed 1/min: 1150

Sleeve travel mm: 8.50...8.60

#### SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1150

Contr.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 600

Del.quantity cm<sup>3</sup>/ : 153.0...155.0

1000H.: (151.0...157.0)

Dispersion cm<sup>3</sup>/ : 3.5

1000H.: (6.0)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 62...70

Testing:

1st c-rod trav.mm : 11.90

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4.00

Speed 1/min : 1250...1280

4th speed 1/min : 1350

C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever

position degrees: 9...17

Testing:

Speed 1/min : 100

C-rod trav.mm min : 8.00

Speed 1/min : 350

C-rod trav.mm : 4.90...5.10

C-rod trav.mm : 2.00

Speed 1/min : 500...560

#### CONSTANT REGULATION

Speed 1/min : 370...440

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 600

Contr.-rod trav.mm: 12.90...13.00

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 9.90...10.00

2nd pressure hPa : 340

C-rod trav.mm : 12.00...12.10

3rd pressure hPa : 200

C-rod trav.mm : 10.60...10.80

#### SWITCH-OVER POINT

Speed 1/min : 290(310)

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600

Speed 1/min : 700

Del. quantity cm3/ : 159.0...163.0  
1000H.: (157.0...165.0)  
Dispersion cm3/ : 5.0  
1000H.: (7.0)  
Charge press. hPa : -  
Speed 1/min : 1100  
Del. quantity cm3/ : 108.0...110.0  
1000H.: (106.0...112.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 7,8 B 1  
Edition : 15.12.86  
Superceeded : -  
Calibrating oil : ISO-4113

Combination no. : 9 400 087 367

Injection pump  
Pump designation : PES6P110A720RS3151  
EP type number : 9 400 087 047  
Governor  
Governor design. : RQV350...1200PA777-1  
Governor no. : 9 420 080 234

Customer-spec. information  
Customer : FORD (FTO)

Engine : 7,8 L TC

1st version kW : 165.6  
Speed 1/min: 2400

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00X1,50X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27



Prestroke mm : 4.25...4.35  
                  : (4.20...4.40)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>CS</sup>: 0-60-120-180-240-300

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 1200  
-----  
Contr.-rod trav.mm: 14.10...14.20  
-----  
Del.quantity cm<sup>3</sup>/ : 14.1...14.3  
-----  
100H.: (13.9...14.5)  
-----  
Dispersion cm<sup>3</sup>/ : 0.50  
-----  
100H.: (0.90)  
-----  
2nd speed 1/min: 350  
Contr.-rod trav. m: 7.40...7.60  
Del.quantity cm<sup>3</sup>/ : 1.6...2.0  
100H.: (1.3...2.2)  
Dispersion cm<sup>3</sup>/ : 0.35  
100H.: (0.55)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 0.60...1.30  
2nd speed 1/min: 500  
Sleeve travel mm: 2.30...2.70  
3rd speed 1/min: 800  
Sleeve travel mm: 4.00...4.30  
4th speed 1/min: 1000  
Sleeve travel mm: 5.00...5.30  
5th speed 1/min: 1300  
Sleeve travel mm: 7.20...7.30

#### SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 1350  
Cont.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1200  
Charge press. hPa : 800  
Del.quantity cm<sup>3</sup>/ : 141.5...143.5  
1000H.: (139.5...145.5)

Dispersion cm<sup>3</sup>/ : 5.0  
1000H.: (9.0)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 56...64

#### Testing:

1st c-rod trav.mm : 13.10  
Speed 1/min : 1260...1270  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1425...1455  
4th speed 1/min : 1600  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 11...19

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 3500  
Speed 1/min : 7.40.  
C-rod trav.mm : ..7.60  
C-rod trav.mm : 2.00  
Speed 1/min : 620...680

#### CONSTANT REGULATION

Speed 1/min : 370...440

compensator (LDA,ADA,ALDA)

#### 1st version

##### Setting

Speed 1/min : 500  
Pressure hPa : 800  
Contr.-rod trav.mm: 13.80...13.90

##### Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 12.10...12.20  
2nd pressure hPa : 580  
C-rod trav.mm : 13.70...13.80  
3rd pressure hPa : 390  
C-rod trav.mm : 12.60...12.80

#### SWITCH-OVER POINT

Speed 1/min : 290(310)

#### FUEL-DELIVERY CHARACTERISTICS

#### 1st version

Charge press. hPa : 800  
Speed 1/min : 800  
Del.quantity cm<sup>3</sup>/ : 119.0...121.0  
1000H.: (117.0...123.0)

Charge press. hPa : -  
Speed 1/min : 500  
Del. quantity cm3/ : 73.0...75.0  
1000H.: (70.0...78.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : VOL 10,0 Q9  
Edition : 10.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 087 368  
Injection pump  
Pump designation : PE6P110A32ORS3108V  
EP type number : 0 411 816 737  
Governor  
Governor design. : RQV250...1100PA589-1  
Governor no. : 9 420 080 166

Customer-spec. information  
Customer : VOLVO

Engine : THD 101 FD

1st version kW : 210  
Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 3,00...3,10  
: (2,95...3,15)

Contr.-rod trav. mm: 9,0...12,0

Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 700

Contr.-rod trav.mm: 13,7...13,8

Del.quantity cm3/ : 18,0...18,2

100H.: (17,7...18,5)

Dispersion cm3/ : 0,4

100H.: (0,75)

2nd speed 1/min: 250

Contr.-rod trav. m: 5,4...5,6

Del.quantity cm3/ : 3,2...3,6

100H.: (2,95...3,85)

Dispersion cm3/ : 0,3

100H.: (0,6)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 250

Sleeve travel mm: 1,2...1,3

2nd speed 1/min: 370

Sleeve travel mm: 2,6...3,0

3rd speed 1/min: 430

Sleeve travel mm: 3,5...3,9

4th speed 1/min: 1160

Sleeve travel mm: 8,1...8,3

5th speed 1/min: 1210

Sleeve travel mm: 9,4...9,6

#### SLEEVE POSITION

Control-lever position

Degree: MAX.

Speed 1/min: 1175

Contr.-rod travelmm: 15,2...17,8

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 700

Charge press. hPa: 1200

Del.quantity cm3/ : 180,0...182,0

1000H.: (177,0...185,0)

Dispersion cm3/ : 4,0

1000H.: (7,5)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 61...69

Testing:

1st c-rod trav.mm : 12,7

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1220...1250

4th speed 1/min : 1350

C-rod trav.mm : 0...1,0

#### LOWEST RATED SPEED I

Control-lever

position degrees: 7...15

Testing:

Speed 1/min : 100

C-rod trav.mm min : 6,7

Speed 1/min : 250

C-rod trav.mm : 5,4...5,6

C-rod trav.mm : 2,0

Speed 1/min : 345...405

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 1200

Contr.-rod trav.mm: 13,7...13,8

Measurement

Speed 1/min : 500

C-rod trav.mm : 9,8...9,9

2nd pressure hPa : 720

C-rod trav.mm : 12,8...12,9

3rd pressure hPa : 360

C-rod trav.mm : 10,9...11,0

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700

Del.quantity cm3/ : 108,0...110,0

1000H.: (105,0...113,0)

Dispersion cm3/ : -

1000H.: -

Remarks:

Because of flattening, set the spring  
preload on new delivery-valve holders  
to 2.9...3.1 mm.

APPLICATION

Omnibus

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : VOL 10,0Q10  
 Edition : 10.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 087 369  
 Injection pump  
 Pump designation : PE6P110A32ORS3108Z  
 EP type number : 0 411 816 728  
 Governor  
 Governor design. : RQV250...1100PA589-1  
 Govenner no. : 9 420 080 166

Customer-spec. information  
 Customer : VOLVO

Engine : THD101GB

1st version kW : 160  
 Speed 1/min: 2200

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 3,00...3,10  
 : (2,95...3,15)  
 Contr.-rod trav.mm: 9,0...12,0

Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 700

Contr.-rod trav.mm: 10,5...10,6

Del.quantity cm<sup>3</sup>/ : 12,0...12,3

100H.: (11,8...12,6)

Dispersion cm<sup>3</sup>/ : 0,4

100H.: (0,75)

2nd speed 1/min: 250

Contr.-rod trav. m: 5,4...5,6

Del.quantity cm<sup>3</sup>/ : 3,2...3,6

Dispersion cm<sup>3</sup>/ : 0,3

100H.: (0,6)

(B) Setting of injection pump with  
 externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 250

Sleeve travel mm: 1,2...1,3

2nd speed 1/min: 370

Sleeve travel mm: 2,6...3,0

3rd speed 1/min: 430

Sleeve travel mm: 3,5...3,9

4th speed 1/min: 1160

Sleeve travel mm: 8,1...8,3

5th speed 1/min: 1210

Sleeve travel mm: 9,4...9,6

**SLEEVE POSITION**

Control-lever position

Degree: MAX.

Speed 1/min: 1175

Cont.-rod travelmm: 15,2...17,8

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 700

Charge press. hPa : 750

Del.quantity cm<sup>3</sup>/ : 120,0...123,0

1000H.: (118,0...126,0)

Dispersion cm<sup>3</sup>/ : 4,0

1000H.: (7,5)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 52...60

Testing:

1st c-rod trav.mm : 9,5

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1205...1235

4th speed 1/min : 1350

C-rod trav.mm : 0...1,0

LOWEST RATED SPEED I

Control-lever

position degrees: 8...12

Testing:

Speed 1/min : 100

C-rod trav.mm min : 6,9

Speed 1/min : 250

C-rod trav.mm : 5,4...5,6

C-rod trav.mm : 2,0

Speed 1/min : 350...410

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 750

Contr.-rod trav.mm: 10,5...10,6

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 9,6...9,8

2nd pressure hPa : 250

C-rod trav.mm : 10,3...10,4

3rd pressure hPa : 220

C-rod trav.mm : 10,0...10,2

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700

Del.quantity cm3/ : 104,5...107,5

1000H.: (102,0...110,0)

Dispersion cm3/ : -

1000H.: -

Remarks:

Because of flattening, set the spring preload on new delivery-valve holders to 2.9...3.1 mm.

APPLICATION

Omnibus

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : SCA 14,2 A4  
 Edition : 17.11.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 087 372  
 Injection pump  
 Pump designation : PE8P120A920/4LS7002T  
 EP type number : 9 400 087 054  
 Governor  
 Governor design. : RQV200...1000PA547-2  
 Govenrer no. : 9 420 080 238

Customer-spec. information  
 Customer : SAAB-SCANIA

Engine : DSC 14 07

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 015

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 1 688 901 019

Opening  
 pressure, bar : 207...210

Perforated-plate  
 diameter mm : 0,8

Test inj. tubing : 1 680 750 015

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 5.00...5.10  
 : (4.95...5.15)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1-2-7-3-4-5-6-8

SD ang. spacing°CS: 0-45-90-135-180-225-  
 270-315

Tolerance + - ° : 0.5(0.75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 700

Contr.-rod trav.mm: 13.20...13.30

Del.quantity cm3/ : 18.7...18.9

100H.: (18.4...19.2)

Dispersion cm3/ : 0.6

100H.: (0.9)

2nd speed 1/min: 225

Contr.-rod trav. m: 4.90...5.10

Del.quantity cm3/ : 1.0...1.4

100H.: (-)

Dispersion cm3/ : 0.3

100H.: (0.6)

(B) Setting of injection pump with  
 externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 225

Sleeve travel mm: 1.00...1.60

2nd speed 1/min: 350

Sleeve travel mm: 2.50...2.90

3rd speed 1/min: 650

Sleeve travel mm: 4.60...4.90

4th speed 1/min: 1140

Sleeve travel mm: 8.40...8.50

**SLEEVE POSITION**

Control-lever position

Degree: -1

Speed 1/min: 1000

Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 700

Charge press. hPa : 600

Del.quantity cm3/ : 187.0...189.0

1000H.: (184.0...192.0)

Dispersion cm3/ : 6.0

1000H.: (9.0)



HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 56...64

Testing:

1st c-rod trav.mm : 12.20  
Speed 1/min : 1040...1050  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1150...1180  
4th speed 1/min : 1250  
C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I

Control-lever  
position degrees: 6...14

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 5.90  
Speed 1/min : 225  
C-rod trav.mm : 4.40...4.60  
C-rod trav.mm : 2.00  
Speed 1/min : 310...370

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 600  
Contr.-rod trav.mm: 13.20...13.30

Measurement

Speed 1/min : 500

1st pressure hPa : -  
C-rod trav.mm : 11.30...11.40  
2nd pressure hPa : 355  
C-rod trav.mm : 12.50...12.60  
3rd pressure hPa : 260  
C-rod trav.mm : 11.80...12.00

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 1000  
Del.quantity cm<sup>3</sup>/ : 183.0...191.0  
1000H.: (181.0...193.0)  
Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 137.0...141.0  
1000H.: (135.0...143.0)

Remarks:

Because of flattening, set the spring preload on new delivery-valve holders to 3.0...3.1 mm.

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 M  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 022  
Injection pump  
Pump designation : PES6A100D41ORS3032  
Governor  
Governor design. : RSV400...1100A2B2086  
L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 413 385 007

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 1,95...2,05  
: (1,90...2,10)  
Contr.-rod trav.mm: 21,0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 11,45  
-----  
Del.quantity cm3/ : 10,9...11,1  
-----  
Dispersion cm3/ : 0,30  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 6,8  
Del.quantity cm3/ : 1,3...1,7  
Dispersion cm3/ : 0,40

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 1200  
Del.quantity cm3/ : 109,0...111,0

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 35...43

## Testing:

1st c-rod trav.mm : 10,45  
Speed 1/min : 1145...1155  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1195...1225  
4th speed 1/min : 1250  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 14...20  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 6,3

## Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400

C-rod trav.mm : 6,8  
C-rod trav.mm : 2,0  
Speed 1/min : 460...520  
Speed 1/min : 600  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 11,40...11,50  
2nd speed 1/min : 1000  
C-rod trav.mm : 11,35...11,65  
3rd speed 1/min : 750  
C-rod trav.mm : 12,75...12,95

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 420  
Contr.-rod trav.mm: 12,75...12,85

Measurement

Speed 1/min : 500

1st pressure hPa : 200  
C-rod trav.mm : 11,10...11,50

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200  
Speed 1/min : 650  
Del.quantity cm3/ : 126,0...129,0  
Speed 1/min : 500  
Del.quantity cm3/ : 78,5...81,5

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 A3  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 019  
Injection pump  
Pump designation : PES6A100D420LS3024  
Governor  
Governor design. : RSV375...1050A2B2072  
R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2.0...2,1  
: (1,95...2,15)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 10,35

Del.quantity cm3/ : 11,1...11,3

Dispersion cm3/ : 0,30

2nd speed 1/min: 375

Contr.-rod trav. m: 6,3

Del.quantity cm3/ : 1,7...2,3

Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Del.quantity cm3/ : 111,0...113,0

1000H.: (109,0...115,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 47...55

Testing:

1st c-rod trav.mm : 9,35

Speed 1/min : 1090...1100

2nd c-rod trav.mm : 4,0

Speed 1/min : 1170.. 1200

4th speed 1/min : 1250

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 24...32

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 5,7...5,9

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 375

C-rod trav.mm : 6,2...6,4  
C-rod trav.mm : 2,0  
Speed 1/min : 495...555

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 10,35  
2nd speed 1/min : 700  
C-rod trav.mm : 10,55...10,85  
3rd speed 1/min : 600  
C-rod trav.mm : 10,70...10,80

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 110,0...116,0  
1000H.: (109,0...117,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 108,0...111,0  
1000H.: (104,0...115,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 K  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO.3114  
Combination no. : 9 400 230 023  
Injection pump  
Pump designation : PES6A100D41ORS3037  
Governor  
Governor design. : RSV400...900A7B2088L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 AT-05

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 35...45

Overflow valve : 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 1 680 750 008

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 1,95...2,05  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

## BASIC SETTING

1st speed 1/mi: 890

Contr.-rod trav.mm: 11,3

Del.quantity cm<sup>3</sup>/ : 11,2...11,4

Dispersion cm<sup>3</sup>/ : 0,30

2nd speed 1/min: 400

Contr.-rod trav. m: 6,2

Del.quantity cm<sup>3</sup>/ : 1,3...1,7

Dispersion cm<sup>3</sup>/ : 0,30

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 890

Del.quantity cm<sup>3</sup>/ : 112,0...124,0

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 48...56

Testing:

1st c-rod trav.mm : 10,3

Speed 1/min : 915...925

2nd c-rod trav.mm : 4,0

Speed 1/min : 945...975

4th speed 1/min : 1030

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 20...28

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 5,7

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 400

C-rod trav.mm : 6,2

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 A4  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 024  
 Injection pump  
 Pump designation : PES6A100D420LS3024  
 Governor  
 Governor design. : RSV375...1100A2B2089  
 DR

Customer-spec. information  
 Customer : CASE

Engine : A 504 BDT

1st version kW : 121  
 Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2,0...2,1  
 : (1,95...2,15)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,8

Del.quantity cm3/ : 10,8...11,0

Dispersion cm3/ : 0,30

2nd speed 1/min: 375

Contr.-rod trav. m: 7,1

Del.quantity cm3/ : 1,8...2,4

Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 108,0...110,0

1000H.: (106,0...112,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 50...58

Testing:

1st c-rod trav.mm : 9,8

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1230...1260

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 26...34

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 6,5...6,7

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
Speed 1/min : 375  
C-rod trav.mm : 7,0...7,2  
C-rod trav.mm : 2,0  
Speed 1/min : 520...580  
Speed 1/min : 600  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,80  
2nd speed 1/min : 700  
C-rod trav.mm : 11,0...11,30  
3rd speed 1/min : 600  
C-rod trav.mm : 11,15...11,25

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 104,5...110,5  
1000H.: (103,5...111,5)  
Speed 1/min : 600  
Del.quantity cm3/ : 102,5...105,5  
1000H.: (98,5...109,5)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 AS  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 025  
Injection pump  
Pump designation : PES6A100D420LS3024  
Governor  
Governor design. : RSV375...1050A2B2090  
R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-gil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,0...2,1  
: (1,95...2,15)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 12,05

Del.quantity cm3/ : 11,8...12,0

Dispersion cm3/ : 0,30

2nd speed 1/min: 375  
Contr.-rod trav. m: 5,85  
Del.quantity cm3/ : 1,9...2,5  
Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x :

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Del.quantity cm3/ : 117,5...119,5  
1000H.: (115,5...121,5)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 40,5...48,5

Testing:  
1st c-rod trav.mm : 11,05  
Speed 1/min : 1065...1075  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1150...1180  
4th speed 1/min : 1260  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 19,5...27,5  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 5,35

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 375

C-rod trav.mm : 5,85  
C-rod trav.mm : 2,0  
Speed 1/min : 565...625  
Speed 1/min : 600  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 12,00...12,10  
2nd speed 1/min : 700  
C-rod trav.mm : 12,15...12,45  
3rd speed 1/min : 600  
C-rod trav.mm : 12,25...12,35

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 116,5...122,5  
1000H.: (115,5...123,5)  
Speed 1/min : 600  
Del.quantity cm3/ : 117,0...120,0  
1000H.: (113,0...124,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 5,5 B3  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 230 028  
  
Injection pump  
Pump designation : PES4A95D320LS2612  
Governor  
Governor design. : RSV425...1100A2B2109  
R

Customer-spec. information  
Customer : CASE

Engine : A 336 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 9 681 273 009  
  
Inlet press., bar : 1.5  
  
Calibrating nozzle-holder  
assembly : 0 691 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 9 681 230 706  
  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,15...2,25  
: (2,1...2,3)  
Cam sequence : 1-3-4-2  
  
SD ang. spacing°CS : 0-90-180-270  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10,35  
-----  
Del.quantity cm3/ : 8,4...8,6  
-----  
Dispersion cm3/ : 0,30  
-----  
2nd speed 1/min: 425  
Contr.-rod trav. m: 7,0  
Del.quantity cm3/ : 1,4...2,0  
Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Cont.-rod travelmm: 0,3...1,7

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm3/ : 84,0...86,0  
1000H.: (82,0...88,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 49...57

Testing:  
1st c-rod trav.mm : 9,35  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1215...1245

## LOWEST RATED SPEED I

Control-lever  
position degrees: 27...35  
Setting point w/out aux. spring  
Speed 1/min : 425  
Contr.-rod trav.mm: 6,4...6,6

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 425  
C-rod trav.mm : 6,9...7,1  
C-rod trav.mm : 2,0  
Speed 1/min : 550...610  
Speed 1/min : 650





C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 10,30...10,40

2nd speed 1/min : 750

C-rod trav.mm : 11,0...11,30

3rd speed 1/min : 600

C-rod trav.mm : 11,15...11,35

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750

Del.quantity cm3/ : 87,0...93,0

1000H.: (86,0...94,0)

Speed 1/min : 600

Del.quantity cm3/ : 43,0...46,0

1000H.: (41,0...48,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,2 F1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 029  
Injection pump  
Pump designation : PES6A100D410RS3038  
Governor  
Governor design. : RSV400...1100A2B2106  
L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 1,95...2,05  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5 (0,75)

D02

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,8

Del.quantity cm<sup>3</sup>/ : 10,8...11,0

Dispersion cm<sup>3</sup>/ : 0,30

2nd speed 1/min: 400

Contr.-rod trav. m: 6,6

Del.quantity cm<sup>3</sup>/ : 1,3...1,7

Dispersion cm<sup>3</sup>/ : 0,30

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm<sup>3</sup>/ : 108,0...110,0

1000H.: (106,0...112,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 36...44

Testing:

1st c-rod trav.mm : 9,8

Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1205...1235

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 13...21

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 6,1

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 400

C-rod trav.mm : 6,6

C-rod trav.mm : 2,0

Speed 1/min : 480...540  
Speed 1/min : 850  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 10,75...10,85  
2nd speed 1/min : 650  
C-rod trav.mm : 11,75...12,05

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650  
Del.quantity cm<sup>3</sup>/ : 115,5...118,5  
1000H.: (112,5...121,5)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 5,5 A1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 030  
Injection pump  
Pump designation : PES4A95D42OLS3023  
Governor  
Governor design. : RSV375...1100A2B2108  
R

Customer-spec. information  
Customer : CASE

Engine : A 336 BDT

1st version kW : 79  
Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,0...2,1  
: (1,95...2,15)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-3-4-2

SD ang. spacing°CS: 0-90-180-270  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 9,2

Del.quantity cm3/ : 9,2...9,4

Dispersion cm3/ : 0,30

2nd speed 1/min: 375

Contr.-rod trav. m: 5,8

Del.quantity cm3/ : 1,8...2,4

Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 92,0...94,0

1000H.: (89,0...97,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 45...53

Testing:

1st c-rod trav.mm : 8,2

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1180...1210

4th speed 1/min : 1250

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 20...28

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 5,2...5,4

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
Speed 1/min : 375  
C-rod trav.mm : 5,7...5,9  
C-rod trav.mm : 2,0  
Speed 1/min : 470...530  
Speed 1/min : 650  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,15...9,25  
2nd speed 1/min : 750  
C-rod trav.mm : 10,25...10,55  
3rd speed 1/min : 600  
C-rod trav.mm : 10,45...10,55

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 105,0...111,0  
1000H.: (101,0...115,0)  
Speed 1/min : 600  
Del.quantity cm<sup>3</sup>/ : 105,0...107,0  
1000H.: (101,0...111,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 M  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 031  
Injection pump  
Pump designation : PES6A95D420LS2461  
Governor  
Governor design. : RSC375...1050A2B2110  
R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

1st version kW : 112  
Speed 1/min: 2100

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,15...2,25  
: (2,1...2,3)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 11,0

Del.quantity cm<sup>3</sup>/ : 10,2...10,3

Dispersion cm<sup>3</sup>/ : 0,30

2nd speed 1/min: 375

Contr.-rod trav. m: 5,8

Del.quantity cm<sup>3</sup>/ : 1,7...2,3

Dispersion cm<sup>3</sup>/ : 0,30

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Del.quantity cm<sup>3</sup>/ : 102,0...103,0  
1000H.: (99,0...106,0)

## HIGHEST RATED SPEED

1st version

Control-lever  
position, degrees: 41...49

Testing:

1st c-rod trav.mm : 10,0  
Speed 1/min : 1090...1100

2nd c-rod trav.mm : 4,0  
Speed 1/min : 1125...1155

4th speed 1/min : 1230  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 16...24

Setting point w/out aux. spring

Speed 1/min: 375

Contr.-rod trav.mm: 5,3

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
Speed 1/min : 375  
C-rod trav.mm : 5,8  
C-rod trav.mm : 2,0  
Speed 1/min : 420...480  
Speed 1/min : 600  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 10,95...11,05  
2nd speed 1/min : 750  
C-rod trav.mm : 11,00...11,30  
3rd speed 1/min : 650  
C-rod trav.mm : 11,10...11,30

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm3/ : 98,5...104,5  
1000H.: (96,5...106,5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 I  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 033  
 Injection pump  
 Pump designation : PES6A95D420LS2551  
 Governor  
 Governor design. : RSV400...1050A0B2114  
 R

Customer-spec. information  
 Customer : CASE

Engine : A 504 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
 : (2,15...2,35)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 10,8

Del.quantity cm3/ : 7,8...8,0

Dispersion cm3/ : 0,30

2nd speed 1/min: 400

Contr.-rod trav. m: 7,8

Del.quantity cm3/ : 1,5...2,1

Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Del.quantity cm3/ : 77,5...79,5

1000H.: (74,5...82,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 44...52

Testing:

1st c-rod trav.mm : 9,8

Speed 1/min : 1090...1100

2nd c-rod trav.mm : 4,0

Speed 1/min : 1210...1240

3rd c-rod trav.mm : 2,5

Speed 1/min : 1255

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 23,5...31,5

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 7,7...7,9

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 630...690  
Speed 1/min : 680  
C-rod trav.mm max : 1,0

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 10,75...10,85  
2nd speed 1/min : 700  
C-rod trav.mm : 11,75...12,05  
3rd speed 1/min : 600  
C-rod trav.mm : 12,05...12,15

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 84,0...90,0  
1000H.: (80,0...94,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 92,0...94,0  
1000H.: (90,0...98,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 5,5 B2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 035  
Injection pump  
Pump designation : PES4A95D320LS2612  
Governor  
Governor design. : RSV400...1000A2B2128  
R

Customer-spec. information  
Customer : CASE

Engine : A 336 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,15...2,25  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-3-4-2

SD ang. spacing<sup>o</sup>CS: 0-90-180-270  
Tolerance + - : 0,5(0,75)

D10

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1000  
-----  
Contr.-rod trav.mm: 10,5  
-----  
Del.quantity cm<sup>3</sup>/ : 8,4...8,6  
-----  
Dispersion cm<sup>3</sup>/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 6,9  
Del.quantity cm<sup>3</sup>/ : 1,4...2,0  
Dispersion cm<sup>3</sup>/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0  
Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1000  
Del.quantity cm<sup>3</sup>/ : 84,0...86,0  
1000H.: (82,0...88,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 46...54

Testing:  
1st c-rod trav.mm : 9,5  
Speed 1/min : 1040...1050  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1115...1145  
4th speed 1/min : 1170  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 26,5...34,5  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 6,3...6,5

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0

Speed 1/min : 400  
C-rod trav.mm : 6,0...7,0  
C-rod trav.mm : 2,0  
Speed 1/min : 550...610

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1000  
C-rod trav.mm : 10,45...10,55  
2nd speed 1/min : 750  
C-rod trav.mm : 11,00...11,30  
3rd speed 1/min : 600  
C-rod trav.mm : 11,15...11,35

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm3/ : 87,0...93,0  
1000H.: (86,0...94,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 90,0...92,0  
1000H.: (87,0...95,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,0 B  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 037  
Injection pump  
Pump designation : PES8A95D32ORS2620  
Governor  
Governor design. : RQV325...1400AB1144R

Customer-spec. information  
Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 019  
Inlet press., bar : 2.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 175  
Test inj. tubing : 1 680 750 008

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,3...3,4  
                  : (3,25...3,45)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

270-315  
Tolerance + - ° : 0,5(0,75)  
SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 11,8...11,9  
-----  
Del.quantity cm3/ : 7,6...7,8  
-----  
Dispersion cm3/ : 0,35  
-----  
2nd speed 1/min: 350  
Contr.-rod trav. m: 7,5...7,7  
Del.quantity cm3/ : 0,9...1,5  
Dispersion cm3/ : 0,35

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 17/min: 800  
Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm3/ : 76,0...78,0

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 63,5...68,5

## Testing:

1st c-rod trav.mm : 10,8  
Speed 1/min : 1450...1460  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1555...1585  
4th speed 1/min : 1650  
C-rod trav.mm : 0...1,0

## LOWEST RATED SPEED I

Control-lever  
position degrees: 8...16  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 7,5...7,7

## Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9,2  
C-rod trav.mm : 2,0  
Speed 1/min : 655...715

SWITCH-OVER POINT

Speed 1/min : 205...265

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 840

Del.quantity cm<sup>3</sup>/ : 62,0...64,0

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,0 E2  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 039  
 Injection pump  
 Pump designation : PES8A95D32ORS2624  
 Governor  
 Governor design. : RQV325...1400AB1149-1R

Customer-spec. information  
 Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 019

Inlet press., bar : 2.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 008

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2,55...2,65  
 : (2,5...2,7)  
 Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

Tolerance + - ° : 270-315  
 : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400

Contr.-rod trav.mm: 12,3

Del.quantity cm3/ : 7,7...7,9

Dispersion cm3/ : 0,30

100H.: (0,60)

2nd speed 1/min: 325

Contr.-rod trav. m: 7,4

Del.quantity cm3/ : 0,9...1,5

Dispersion cm3/ : 0,30

100H.: (0,60)

## SLEEVE POSITION

Control-lever position

Degree: MAX

Cont.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1400

Del.quantity cm3/ : 77,0...79,0

1000H.: (75,0...81,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 62...70

Testing:

1st c-rod trav.mm : 11,3

Speed 1/min : 1440...1450

2nd c-rod trav.mm : 4,0

Speed 1/min : 1545...1575

4th speed 1/min : 1640

C-rod trav.mm : 0...1,0

## LOWEST RATED SPEED I

Control-lever

position degrees: 16...24

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 7,3...7,5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 9,1

C-rod trav.mm : 2,0

Speed 1/min : 630...690

SWITCH-OVER POINT

Speed 1/min : 170...250

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del. quantity cm<sup>3</sup>/ : 66,0...69,0  
1000h.: (64,0...71,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3L  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO.4113  
  
Combination no. : 9 400 230 043  
  
Injection pump  
Pump designation : PES6A95D420LS255i  
Governor  
Governor design. : RSV375...1100A0B2155  
R

Customer-spec. information  
Customer : CASE

Engine : A-504 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 40...42  
  
Overflow valve : 9 681 273 009  
  
Inlet press., bar : 1.5  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 9 681 230 706  
  
Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
: (2,15...2,35)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 11,5  
-----  
Del.quantity cm3/ : 10,0...10,2  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 7,2  
Del.quantity cm3/ : 1,9...2,3  
Dispersion cm3/ : 0,35  
100H.: (0,60)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm3/ : 100,0...102,0  
1000H.: (98,0...104,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 47...55

## Testing:

1st c-rod trav.mm : 10,5  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1200...1230  
3rd c-rod trav.mm : 2,5  
Speed 1/min : 1225  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 23...31  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 7,1...7,3

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 600...660

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 11,5  
2nd speed 1/min : 700  
C-rod trav.mm : 12,7...12,9  
3rd speed 1/min : 600  
C-rod trav.mm : 13,0...13,2

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 117,5...120,5  
1000H.: (115,0...123,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 117,0...120,0  
1000H.: (115,0...122,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 1  
Edition : 7.86  
Superceeded : -  
Combination no. : 9 400 230 044  
Injection pump  
Pump designation : PES6A100D41ORS3040  
Governor  
Governor design. : RSV400...1000A2B2160  
Governor design. : L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010  
Inlet press., bar : 1.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 1 680 750 008

Outside diameter  
x wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Prestroke mm : 1,95...2,05  
: (1,9...2,1)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 9,3  
-----  
Del.quantity cm3/ : 9,80...10,00  
-----  
Dispersion cm3/ : 0,30  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 5,3  
Del.quantity cm3/ : 1,20...1,80  
Dispersion cm3/ : 0,40

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 800  
Del.quantity cm3/ : 98,0...100,0

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 45...53

Testing:  
1st c-rod trav.mm : 8,3  
Speed 1/min : 1145...1155  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1185...1215  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 4,7...4,9

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 5,2...5,4  
C-rod trav.mm : 2,0

Speed 1/min : 480...540

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 9,3

2nd speed 1/min : 750

C-rod trav.mm : 10,6...10,8

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 70

Contr.-rod trav.mm: 9,65...9,75

Measurement

Speed 1/min : 500

1st pressure hPa : 170

C-rod trav.mm : 10,50...10,90

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 800

Speed 1/min : 750

Del.quantity cm3/ : 112,0...118,0

Speed 1/min : 500

Del.quantity cm3/ : 84,5...88,5

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 C3  
Edition : 7.86  
Superceeded : -  
Combination no. : 9 400 230 045  
Injection pump  
Pump designation : PES6A95D41ORS2522-1  
Governor  
Governor design. : RSV425...1100A2B2161  
Governor design. : L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 1,85...1,95  
                  : (1,80...2,00)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing °CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

D20

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 9,0  
-----  
Del.quantity cm3/ : 8,7...8,9  
-----  
Dispersion cm3/ : 0,30  
-----  
100H.: (0,50)  
-----  
2nd speed 1/min: 425  
Contr.-rod trav. m: 5,8  
Del.quantity cm3/ : 1,9...2,3  
Dispersion cm3/ : 0,30  
100H.: (0,50)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 600  
Del.quantity cm3/ : 86,5...88,5  
1000H.: (84,5...90,5)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 48...56

Testing:  
1st c-rod trav.mm : 8,0  
Speed 1/min : 1145...1155  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1185...1215  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 24...32  
Setting point w/out aux. spring  
Speed 1/min : 425  
Contr.-rod trav.mm: 5,2...5,4

Testing:  
Speed 1/min : 100

C-rod trav.mm min : 19,0  
Speed 1/min : 425  
C-rod trav.mm : 5,7...5,9  
C-rod trav.mm : 2,0  
Speed 1/min : 560...620

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,0  
2nd speed 1/min : 650  
C-rod trav.mm : 10,25...10,55

compensator (LDA,ADA,ALDA)

#### 1st version

##### Setting

Speed 1/min : 500  
Pressure hPa : 100  
Contr.-rod trav.mm: 10,35...10,45

##### Measurement

Speed 1/min : 500

1st pressure hPa : 150  
C-rod trav.mm : 10,40...10,80

#### FUEL-DELIVERY CHARACTERISTICS

#### 1st version

Charge press. hPa : 600  
Speed 1/min : 650  
Del.quantity cm<sup>3</sup>/ : 101,0...107,0  
1000H.: (100,0...108,0)  
Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 89,0...93,0  
1000H.: (87,0...95,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 C4  
Edition : 7.86  
Superceeded : -  
Combination no. : 9 400 230 045  
Injection pump  
Pump designation : PES6A95D410RS2522-1  
Governor  
Governor design. : RSV42S...1100A2C2161  
Governor design. : L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 4 681 271 001

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 27...29

Prestroke mm : 1,85...1,95  
: (1,80...2,00)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5...0,75

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 9,0...9,1

Del.quantity cm3/ : 8,7...8,9

100H.: (8,4...9,0)

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 425

Contr.-rod trav. m: 5,5...5,7

Del.quantity cm3/ : 1,8...2,2

100H.: (1,6...2,5)

Dispersion cm3/ : 0,35

100H.: (0,55)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...0,7

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 600

Del.quantity cm3/ : 86,5...88,5

1000H.: (84,0...90,0)

Dispersion cm3/ : 3,5

1000H.: (6,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 8,0

Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1175...1205

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,4

## LOWEST RATED SPEED I

Control-lever

position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 425  
Contr.-rod trav.mm: 5,0...5,2  
Speed 1/min : 425  
C-rod trav.mm : 5,5...5,7  
C-rod trav.mm : 2,0  
Speed 1/min : 590...650

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,0...9,1  
2nd speed 1/min : 650  
C-rod trav.mm : 10,4...10,6

compensator (LDA,ADA,ALDA)

1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 147  
Contr.-rod trav.mm: 10,55...10,65

Measurement

Speed 1/min : 500  
1st pressure hPa : 100  
C-rod trav.mm : 10,2...10,6  
C-rod trav.mm : 10,2...10,4

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 650  
Del.quantity cm3/ : 102,5...105,5  
1000h.: (100,0...108,0)  
Speed 1/min : 500  
Del.quantity cm3/ : -  
1000h.: (87,0...95,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 J  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 047  
 Injection pump  
 Pump designation : PES6A95D41ORS2561  
 Governor  
 Governor design. : RSV600...1100A2B2049  
 -1L

Customer-spec. information  
 Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 413 385 007

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 175

Test inj. tubing : 1 680 750 008

Outside diameter  
 x Wall thickness  
 x Length mm : 6,35x1,675x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 1,85...1,95  
 : (1,80...2,00)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,7

Del.quantity cm<sup>3</sup>/ : 10,7...10,9

Dispersion cm<sup>3</sup>/ : 0,30

2nd speed 1/min: 600

Contr.-rod trav. m: 5,1

Del.quantity cm<sup>3</sup>/ : 1,2...1,6

Dispersion cm<sup>3</sup>/ : 0,30

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm<sup>3</sup>/ : 107,0...109,0  
 1000H.: (104,0...112,0)

## HIGHEST RATED SPEED

1st version

Control-lever  
 position degrees: 44...52

Testing:

1st c-rod trav.mm : 9,7  
 Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1200...1230

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
 position degrees: 25...33

Setting point w/out aux. spring

Speed 1/min : 600

Contr.-rod trav.mm: 4,5...4,7

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 600

C-rod trav.mm : 5,0...5,2

C-rod trav.mm : 2,0

Speed 1/min : 720...780

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 10,7

2nd speed 1/min : 950

C-rod trav.mm : 1145...1165

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 950

Del.quantity cm<sup>3</sup>/ : 120,0...124,0

1000H.: (118,0...126,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 65  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 049  
Injection pump  
Pump designation : PES6A95D32OLS2647  
Governor  
Governor design. : RSV400...1050AOB2034  
-1R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009  
Inlet press., bar : 1.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 9 681 230 706  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,95...3,05  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

D26

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050  
Contr.-rod trav.mm: 9,5  
Del.quantity cm3/ : 9,5...9,7  
Dispersion cm3/ : 0,30  
100H.: (0,60)  
2nd speed 1/min: 400  
Contr.-rod trav. m: 5,2  
Del.quantity cm3/ : 1,8...2,4  
Dispersion cm3/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 17min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Del.quantity cm3/ : 95,0...97,0  
1000H.: (93,0...99,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 36...44

## Testing:

1st c-rod trav.mm : 8,5  
Speed 1/min : 1080...1100  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1165...1185  
3rd c-rod trav.mm : 2,5  
Speed 1/min : 1190...1210  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 5,1...5,3

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 585...645

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 9,5  
2nd speed 1/min : 750  
C-rod trav.mm : 10,00...10,30  
3rd speed 1/min : 600  
C-rod trav.mm : 10,10...10,20

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 101,0...107,0  
1000H.: (100,0...108,0)  
Speed 1/min : 600  
Del.quantity cm<sup>3</sup>/ : 100,0...102,0  
1000H.: (98,0...106,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 5,5 B4  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 050  
Injection pump  
Pump designation : PES4A95D320LS2612  
Governor  
Governor design. : RSV375...1100A0B2167

Customer-spec. information  
Customer : CASE

Engine : A 336 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,15...2,25  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-3-4-2

SD ang. spacing°CS: 0-90-180-270  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10,4  
-----  
Del.quantity cm3/ : 8,8...9,0  
-----  
Dispersion cm3/ : 0,30  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 7,1  
Del.quantity cm3/ : 1,5...2,1  
Dispersion cm3/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm3/ : 88,0...90,0  
1000H.: (86,0...92,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 39...47

## Testing:

1st c-rod trav.mm : 9,4  
Speed 1/min : 1130...1150  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1210...1230  
3rd c-rod trav.mm : 2,5  
Speed 1/min : 1240...1250  
4th speed 1/min : 1350  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 7,0...7,2

## Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 570...640

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,35...10,45  
2nd speed 1/min : 700  
C-rod trav.mm : 11,30...11,60  
3rd speed 1/min : 600  
C-rod trav.mm : 11,60...11,70

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 95,0...101,0  
1000H.: (94,0...102,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 101,0...103,0  
1000H.: (97,0...107,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 K3  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO.4113  
Combination no. : 9 400 230 052  
Injection pump  
Pump designation : PES6A95D420LS2551  
Governor  
Governor design. : RSV375...1050A0B2170

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 0 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 0 681 273 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,15...2,25  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050  
-----  
Contr.-rod trav.mm: 10,65  
-----  
Del.quantity cm3/ : 8,2...8,4  
-----  
Dispersion cm3/ : 0,30  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 7,6  
Del.quantity cm3/ : 1,7...2,3  
Dispersion cm3/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Del.quantity cm3/ : 81,5...83,5  
1000H.: (79,5...85,5)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 36...44

Testing:  
1st c-rod trav.mm : 9,65  
Speed 1/min : 1090...1100  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1235...1265  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 7,0...7,2

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 375

C-rod trav.mm : 7,5...7,7  
C-rod trav.mm : 2,0  
Speed 1/min : 690...750

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 10,65  
2nd speed 1/min : 700  
C-rod trav.mm : 10,95...11,25  
3rd speed 1/min : 600  
C-rod trav.mm : 11,15...11,25

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 78,5...82,5  
1000H.: (76,5...84,5)  
Speed 1/min : 600  
Del.quantity cm3/ : 81,5...83,5  
1000H.: (77,5...87,5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 5,5 C  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 053  
Injection pump  
Pump designation : PES4A95D320LS2649  
Governor  
Governor design. : RSV425...1100A2B2109  
-1R

Customer-spec. information  
Customer : CASE

Engine : A 336 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,95...3,05  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-3-4-2

SD ang. spacing °CS: 0-90-180-270  
Tolerance + - : 0,5 (0,75)

E04

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 11,05

Del.quantity cm3/ : 11,8...12,0

Dispersion cm3/ : 0,30

100H.: (0,60)

2nd speed 1/min: 425

Contr.-rod trav. m: 5,2

Del.quantity cm3/ : 1,8...2,4

Dispersion cm3/ : 0,30

100H.: (0,55)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 117,5...119,5

1000H.: (115,5...121,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 41...49

Testing:

1st c-rod trav.mm : 10,05

Speed 1/min : 1130...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1215...1235

3rd c-rod trav.mm : 2,5

Speed 1/min : 1245...1255

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 425

Contr.-rod trav.mm: 5,2

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 540...600

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 11,05  
2nd speed 1/min : 750  
C-rod trav.mm : 11,25...11,55  
3rd speed 1/min : 600  
C-rod trav.mm : 11,45...11,55

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm3/ : 119,0...125,0  
1000H.: (118,0...126,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 121,0...123,0  
1000H.: (117,0...127,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 K  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO.4113  
  
Combination no. : 9 400 230 053  
  
Injection pump  
Pump designation : PES6A95D420LS2551  
Governor  
Governor design. : RSV375...1100A0B2170  
-1R

Customer-spec. information  
Customer : CASE

Engine : A 504 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
: (2,15...2,35)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,65

Del.quantity cm3/ : 8,2...8,4

Dispersion cm3/ : 0,30

100H.: (0,60)

2nd speed 1/min: 375

Contr.-rod trav. m: 7,7

Del.quantity cm3/ : 1,7...2,3

Dispersion cm3/ : 0,30

100H.: (0,55)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 81,5...83,5

1000H.: (79,5...85,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 36...44

Testing:

1st c-rod trav.mm : 9,65

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1250...1280

4th speed 1/min : 1350

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 7,1...7,3

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 375  
C-rod trav.mm : 7,6...7,8  
C-rod trav.mm : 2,0  
Speed 1/min : 690...730

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,65  
2nd speed 1/min : 800  
C-rod trav.mm : 10,90...11,30  
3rd speed 1/min : 600  
C-rod trav.mm : 11,20...11,30

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm<sup>3</sup>/ : 81,0...85,0  
1000H.: (79,0...87,0)  
Speed 1/min : 600  
Del.quantity cm<sup>3</sup>/ : 82,0...84,0  
1000H.: (80,0...88,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 G  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 054  
Injection pump  
Pump designation : PES6A95D320LS2647  
Governor  
Governor design. : RSV375...1100A2B2034  
-2R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Prestroke mm : 2,75...2,85  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

E08

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 12,3  
-----  
Del.quantity cm<sup>3</sup>/ : 13,5...13,7  
-----  
Dispersion cm<sup>3</sup>/ : 0,30  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 5,3  
Del.quantity cm<sup>3</sup>/ : 1,5...2,1  
Dispersion cm<sup>3</sup>/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm<sup>3</sup>/ : 134,5...136,5  
1000H.: (132,5...138,5)  
Dispersion cm<sup>3</sup>/ : 3,0  
1000H.: (6,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 49...57

Testing:  
1st c-rod trav.mm : 11,3  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1210...1240  
3rd c-rod trav.mm : 2,5  
Speed 1/min : 1250  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 23...31  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 5,2...5,4

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 520...580

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 12,3  
2nd speed 1/min : 800  
C-rod trav.mm : 12,45...12,75  
3rd speed 1/min : 600  
C-rod trav.mm : 12,65...12,75

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm<sup>3</sup>/ : 134,5...140,5  
1000H.: (133,5...141,5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 G1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 055  
Injection pump  
Pump designation : PES6A95D320LS2647  
Governor  
Governor design. : RSV375...1050A2B2034  
-3R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Prestroke mm : 2,55...2,65  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

E10

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 12,9

Del.quantity cm3/ : 14,2...14,4

Dispersion cm3/ : 0,30

100H.: (0,60)

2nd speed 1/min: 375

Contr.-rod trav. m: 5,6

Del.quantity cm3/ : 1,7...2,3

Dispersion cm3/ : 0,30

100H.: (0,55)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Del.quantity cm3/ : 141,5...143,5

1000H.: (139,5...145,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 11,9

Speed 1/min : 1090...1100

2nd c-rod trav.mm : 4,0

Speed 1/min : 1160...1190

3rd c-rod trav.mm : 2,5

Speed 1/min : 1200

4th speed 1/min : 1250

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 22...30

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 5,5...5,7

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 545...605

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 12,9  
2nd speed 1/min : 750  
C-rod trav.mm : 13,55...13,85  
3rd speed 1/min : 600  
C-rod trav.mm : 13,65...13,75

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm3/ : 145,0...151,0  
1000H.: (144,0...152,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 G4  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 056  
Injection pump  
Pump designation : PES6A95D320LS2647  
Governor  
Governor design. : RSV375...1050A2B2034  
-4R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,75...2,85  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 11,8

Del.quantity cm<sup>3</sup>/ : 12,8...13,0

Dispersion cm<sup>3</sup>/ : 0,30

100H.: (0,60)

2nd speed 1/min: 375

Contr.-rod trav. m: 5,0

Del.quantity cm<sup>3</sup>/ : 1,4...2,0

Dispersion cm<sup>3</sup>/ : 0,30

100H.: (0,60)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Del.quantity cm<sup>3</sup>/ : 127,5...129,5

1000H.: (125,5...131,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 40...48

Testing:

1st c-rod trav.mm : 10,8

Speed 1/min : 1080...1100

2nd c-rod trav.mm : 4,0

Speed 1/min : 1165...1185

3rd c-rod trav.mm : 2,5

Speed 1/min : 1200

5th speed 1/min : 1250

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 18...26

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 4,9...5,1

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 510...570

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 11,8  
2nd speed 1/min : 750  
C-rod trav.mm : 11,95...12,25  
3rd speed 1/min : 600  
C-rod trav.mm : 12,15...12,25

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 128,0...134,0  
1000H.: (127,0...135,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 H  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 058  
Injection pump  
Pump designation : PES6A95D320LS2647  
Governor  
Governor design. : RSV400...1100A2B2172  
R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 9 681 ~~230~~ 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Prestroke mm : 2,95...3,05  
: (2,85...3,15)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 9,8

Del.quantity cm3/ : 10,3...10,5

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 400

Contr.-rod trav. m: 5,2

Del.quantity cm3/ : 1,8...2,2

Dispersion cm3/ : 0,35

100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 102,5...104,5

1000H.: (100,5...106,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 8,8

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1185...1215

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 20...28

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 4,6...4,8

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 5,1...5,3  
C-rod trav.mm : 2,0  
Speed 1/min : 560...620

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,8  
2nd speed 1/min : 750  
C-rod trav.mm : 10,55...10,75  
3rd speed 1/min : 600  
C-rod trav.mm : 10,95...11,05

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 110,0...114,0  
1000H.: (108,5...116,5)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 G2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 059  
Injection pump  
Pump designation : PES6A95D32OLS2647  
Governor  
Governor design. : RSV375...1050A0B2034  
-6R

Customer-spec. information  
Customer : CASE

Engine : A 504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,95...3,05  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050  
-----  
Contr.-rod trav.mm: 10,5  
-----  
Del.quantity cm3/ : 11,0...11,2  
-----  
Dispersion cm3/ : 0,30  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 5,2  
Del.quantity cm3/ : 1,5...2,1  
Dispersion cm3/ : 0,30  
100H.: (0,60)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Del.quantity cm3/ : 109,5...111,5  
1000H.: (107,5...113,5)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 33,5...41,5

Testing:  
1st c-rod trav.mm : 9,5  
Speed 1/min : 1080...1100  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1165...1185  
3rd c-rod trav.mm : 2,5  
Speed 1/min : 1200  
4th speed 1/min : 1250  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 17,5...25,5  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 5,1...5,3

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 535...595

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 10,5  
2nd speed 1/min : 750  
C-rod trav.mm : 11,05...11,35  
3rd speed 1/min : 600  
C-rod trav.mm : 11,35...11,45

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm3/ : 114,0...120,0  
1000H.: (113,0...121,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 G3  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 060  
Injection pump  
Pump designation : PES6A95D320LS2547  
Governor  
Governor design. : RSV375...1050A0B2034  
-7R

Customer-spec. information  
Customer : CASE

Engine : A 504 BTD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,75...2,85  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050  
-----  
Contr.-rod trav.mm: 12,35  
-----  
Del.quantity cm3/ : 13,5...13,7  
-----  
Dispersion cm3/ : 0,30  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 5,0  
Del.quantity cm3/ : 1,4...2,0  
Dispersion cm3/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Del.quantity cm3/ : 135,0...137,0  
1000H.: (133,0...139,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 42...50

Testing:  
1st c-rod trav.mm : 11,35  
Speed 1/min : 1080...1100  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1160...1180  
3rd c-rod trav.mm : 2,5  
Speed 1/min : 1200  
4th speed 1/min : 1250  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 4,9...5,1

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 540...600

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 12,35  
2nd speed 1/min : 800  
C-rod trav.mm : 12,90...13,20  
3rd speed 1/min : 600  
C-rod trav.mm : 13,05...13,15

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm3/ : 140,0...146,0  
1000H.: (139,0...147,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 5,5 B  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 230 062  
  
Injection pump  
Pump designation : PES4A95D320LS2612  
Governor  
Governor design. : RSV425...1100A0B2167  
-1R

Customer-spec. information  
Customer : CASE

Engine : A 336 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 9 681 273 009  
  
Inlet press., bar : 1.5  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 9 681 230 70:  
  
Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
: (2,15...2,35)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-3-4-2

SD ang. spacing°CS: 0-90-180-270  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10,4  
-----  
Del.quantity cm3/ : 8,5...8,7  
-----  
Dispersion cm3/ : 0,30  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 425  
Contr.-rod trav. m: 7,0  
Del.quantity cm3/ : 1,4...2,0  
Dispersion cm3/ : 0,30  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm3/ : 85,0...87,0  
1000H.: (83,0...89,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 36...44

## Testing:

1st c-rod trav.mm : 9,4  
Speed 1/min : 1130...1150  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1225...1255  
4th speed 1/min : 1350  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 425  
Contr.-rod trav.mm: 6,4...6,6

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 425  
C-rod trav.mm : 6,9...7,1  
C-rod trav.mm : 2,0  
Speed 1/min : 570...640

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,4  
2nd speed 1/min : 700  
C-rod trav.mm : 11,25...11,55  
3rd speed 1/min : 600  
C-rod trav.mm : 11,55...11,65

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm<sup>3</sup>/ : 93,5...99,5  
1000H.: (92,5...101,5)  
Speed 1/min : 600  
Del.quantity cm<sup>3</sup>/ : 99,0...101,0  
1000H.: (97,0...103,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 K1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 063  
Injection pump  
Pump designation : PES6A95D42OLS2551  
Governor  
Governor design. : RSV375...1100A0B2170  
-1R

Customer-spec. information  
Customer : CASE

Engine : A 504 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
                  : (2,15...2,35)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,65

Del.quantity cm3/ : 8,2...8,4

Dispersion cm3/ : 0,30

100H.: (0,60)

2nd speed 1/min: 375

Contr.-rod trav. m: 7,7

Del.quantity cm3/ : 1,7...2,3

Dispersion cm3/ : 0,30

100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 81,5...83,5

1000H.: (79,5...85,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 36...44

Testing:

1st c-rod trav.mm : 9,65

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1250...1280

4th speed 1/min : 1350

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 7,1...7,3

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 375  
C-rod trav.mm : 7,6...7,8  
C-rod trav.mm : 2,0  
Speed 1/min : 690...730

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 10,65  
2nd speed 1/min : 800  
C-rod trav.mm : 10,90...11,30  
3rd speed 1/min : 600  
C-rod trav.mm : 11,20...11,30

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm3/ : 81,0...85,0  
1000H.: (79,0...87,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 82,0...84,0  
1000H.: (78,0...88,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 F2  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 065  
 Injection pump  
 Pump designation : PES6A100D410RS3038-1  
 Governor  
 Governor design. : RSV450...1100A2B2106  
 -1L

Customer-spec. information  
 Customer : JOHN DEERE

Engine : 6466 AT 06

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 008

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 1,95...2,05  
 : (1,90...2,10)  
 Contr.-rod trav.mm : 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,3

Del.quantity cm3/ : 10,2...10,4

Dispersion cm3/ : 0,30

2nd speed 1/min: 450

Contr.-rod trav. m: 6,1

Del.quantity cm3/ : 5,1...5,2

Dispersion cm3/ : 0,20

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 102,0...104,0  
 1000H.: (100,0...106,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 41...49

Testing:

1st c-rod trav.mm : 9,3  
 Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1195...1225

4th speed 1/min : 1300  
 C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 17...25

Setting point w/out aux. spring

Speed 1/min : 450

Contr.-rod trav.mm: 5,5...5,7

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 450

C-rod trav.mm : 6,0...6,2  
C-rod trav.mm : 2,0  
Speed 1/min : 510...570  
Speed 1/min : 850  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,30  
2nd speed 1/min : 650  
C-rod trav.mm : 11,30...11,60

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650  
Del.quantity cm<sup>3</sup>/ : 109,0...113,0  
1000H.: (108,0...114,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 066  
Injection pump  
Pump designation : PES6A100D41ORS2676  
Governor  
Governor design. : RSV425...1100A2B2161  
-1L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
: (2,40...2,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 9,4

Del.quantity cm3/ : 9,9...10,1

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 425

Contr.-rod trav. m: 5,6

Del.quantity cm3/ : 2,1...2,5

Dispersion cm3/ : 0,35

100H.: (0,55)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 600

Del.quantity cm3/ : 99,0...101,0

1000H.: (97,0...103,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 8,4

Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1195...1225

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 22...30

Setting point w/out aux. spring

Speed 1/min : 425

Contr.-rod trav.mm: 5,5...5,7

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 425  
C-rod trav.mm : 5,5...5,7  
C-rod trav.mm : 2,0  
Speed 1/min : 635...695

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,4  
2nd speed 1/min : 750  
C-rod trav.mm : 10,6...10,8

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 170  
Contr.-rod trav.mm: 10,25...10,35

Measurement

Speed 1/min : 500

1st pressure hPa : 80  
C-rod trav.mm : 9,40...9,80  
C-rod trav.mm : 9,20

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 116,0...119,0  
1000H.: (113,5...121,5)  
Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 86,5...89,5  
1000H.: (84,0...92,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 066  
Injection pump  
Pump designation : PES6A100D410RS2676  
Governor  
Governor design. : RSV435...1100A2C2161  
-1L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
                  : (2,40...2,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 9,4

Del.quantity cm3/ : 9,9...10,1

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 425

Contr.-rod trav. m: 5,6

Del.quantity cm3/ : 2,1...2,5

Dispersion cm3/ : 0,35

100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 600

Del.quantity cm3/ : 99,0...101,0

1000H.: (97,0...103,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 8,4

Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1195...1225

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 22...30

Setting point w/out aux. spring

Speed 1/min : 425

Contr.-rod trav.mm: 5,0...5,2

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 425  
C-rod trav.mm : 5,5...5,7  
C-rod trav.mm : 2,0  
Speed 1/min : 635...695

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,4  
2nd speed 1/min : 750  
C-rod trav.mm : 10,6...10,8

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 170  
Contr.-rod trav.mm: 10,25...10,35

Measurement

Speed 1/min : 500  
1st pressure hPa : 80  
C-rod trav.mm : 9,40...9,80  
C-rod trav.mm : 9,20

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 750  
Del.quantity cm3/ : 116,0...119,0  
1000H.: (113,5...121,5)  
Speed 1/min : 500  
Del.quantity cm3/ : 86,5...89,5  
1000H.: (84,0...92,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 230 067  
  
Injection pump  
Pump designation : PES6A100D41ORS2676  
Governor  
Governor design. : RSV425...1100A2C2161  
-2L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
                  : (2,40...2,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10,2...10,3  
-----  
Del.quantity cm3/ : 11,1...11,3  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,6)

2nd speed 1/min: 425  
Contr.-rod trav. m: 5,8...6,0  
Del.quantity cm3/ : 2,4...2,8  
Dispersion cm3/ : 0,35  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 800  
Del.quantity cm3/ : 111,0...113,0  
1000H.: (109,0...115,0)  
Dispersion cm3/ : 3,5  
1000H.: (6,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 43...51  
  
Testing:  
1st c-rod trav.mm : 9,2  
Speed 1/min : 1145...1155  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1190...1220  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,4

## LOWEST RATED SPEED I

Control-lever  
position degrees: 18...26  
Setting point w/out aux. spring  
Speed 1/min : 425

Contr.-rod trav.mm: 5,3...5,5

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 425  
C-rod trav.mm : 5,8...6,0  
C-rod trav.mm : 2,0  
Speed 1/min : 600...660

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,2...10,3  
2nd speed 1/min : 750  
C-rod trav.mm : 11,4...11,6

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 230  
Contr.-rod trav.mm: 11,25...11,35

Measurement

Speed 1/min : 500

1st pressure hPa : 100  
C-rod trav.mm : 9,80...10,20  
C-rod trav.mm : 9,45

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 800  
Speed 1/min : 750  
Del.quantity cm3/ : 127,5...130,5  
1000h.: (125,0...133,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 87,5...90,5  
1000h.: (85,0...93,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H3  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 068  
Injection pump  
Pump designation : PES6A100D410RS2676-1  
Governor  
Governor design. : RSV450...1000A1B2186  
L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010  
Inlet press., bar : 1.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 9 681 230 706  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
: (2,4...2,6)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + -<sup>o</sup> : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1000  
-----  
Contr.-rod trav.mm: 9,9  
-----  
Del.quantity cm3/ : 10,5...10,7  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 450  
Contr.-rod trav. m: 5,4  
Del.quantity cm3/ : 1,8...2,2  
Dispersion cm3/ : 0,35  
100H.: (0,60)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1000  
Del.quantity cm3/ : 105,0...107,0  
1000H.: (103,0...109,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 48...56

## Testing:

1st c-rod trav.mm : 8,9  
Speed 1/min : 1045...1055  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1070...1100  
4th speed 1/min : 1150  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 450  
Contr.-rod trav.mm: 4,8...5,0  
Speed 1/min : 450  
C-rod trav.mm : 5,3...5,5

C-rod trav.mm : 2,0  
Speed 1/min : 560...620

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1000  
C-rod trav.mm : 9,9  
2nd speed 1/min : 700  
C-rod trav.mm : 10,3...10,5

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm<sup>3</sup>/ : 109,5...112,5  
1000H.: (107,0...115,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H4  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 068  
Injection pump  
Pump designation : PES6A100D410RS2676-1  
Governor  
Governor design. : RSV450...1000A1C2186  
L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
: (2,40...2,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1000

Contr.-rod trav.mm: 9,9

Del.quantity cm<sup>3</sup>/ : 10,5...10,7

Dispersion cm<sup>3</sup>/ : 0,35

100H.: (0,60)

2nd speed 1/min: 450

Contr.-rod trav. m: 5,4

Del.quantity cm<sup>3</sup>/ : 1,8...2,2

Dispersion cm<sup>3</sup>/ : 0,35

100H.: (0,60)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1000

Del.quantity cm<sup>3</sup>/ : 105,0...107,0

1000H.: (103,0...109,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 48...56

Testing:

1st c-rod trav.mm : 8,9

Speed 1/min : 1045...1055

2nd c-rod trav.mm : 4,0

Speed 1/min : 1070...1100

4th speed 1/min : 1150

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 22...30

Setting point w/out aux. spring

Speed 1/min : 450

Contr.-rod trav.mm: 4,8...5,0

Speed 1/min : 450

C-rod trav.mm : 5,3...5,5

C-rod trav.mm : 2,0  
Speed 1/min : 560...620

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1000

C-rod trav.mm : 9,9

2nd speed 1/min : 700

C-rod trav.mm : 10,3...10,5

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700

Del.quantity cm3/ : 109,5...112,5

1000H.: (107,0...115,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H6  
Edition : 7.86  
Superceeded : -  
Calibrating oil : OS0-4113  
Combination no. : 9 400 230 070  
Injection pump  
Pump designation : PES6A100D410RS2676-1  
Governor  
Governor design. : RSV4C0...950A1B2186.  
2L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466-T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
                  : (2,75...2,95)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 950  
-----  
Contr.-rod trav.mm: 10,2  
-----  
Del.quantity cm3/ : 9,4...9,6  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 6,5  
Del.quantity cm3/ : 1,8...2,2  
Dispersion cm3/ : 0,35  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 950  
Del.quantity cm3/ : 94,0...96,0  
1000H.: (92,0...98,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 47...55

## Testing:

1st c-rod trav.mm : 9,2  
Speed 1/min : 995...1005  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1050...1080  
4th speed 1/min : 1150  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 5,9...6,1  
Speed 1/min : 400  
C-rod trav.mm : 6,4...6,6

C-rod trav.mm : 2,0  
Speed 1/min : 555...615

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 950

C-rod trav.mm : 10,2

2nd speed 1/min : 650

C-rod trav.mm : 11,4...11,6

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650

Del.quantity cm<sup>3</sup>/ : 112,0...115,0

1000H.: (109,5...117,5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H8  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 071  
Injection pump  
Pump designation : PES6A100D41ORS2676-1  
Governor  
Governor design. : RSV400...900A7B2088-1

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
: (2,4...2,6)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 890

Contr.-rod trav.mm: 12,0

Del.quantity cm3/ : 13,7...13,9

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 400

Contr.-rod trav. m: 5,1

Del.quantity cm3/ : 1,3...1,7

Dispersion cm3/ : 0,35

100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 49...57

Testing:

1st c-rod trav.mm : 11,0

Speed 1/min : 915...925

2nd c-rod trav.mm : 4,0

Speed 1/min : 945...975

4th speed 1/min : 1050

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 20...28

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 4,5...4,7

Speed 1/min : 400

C-rod trav.mm : 5,0...5,2

C-rod trav.mm : 2,0

Speed 1/min : 430...490

## FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 890

Del. quantity cm<sup>3</sup>/ : 137,0...139,0  
1000H.: (135,0...141,0)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : DEE 7,6 H7  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 072  
 Injection pump  
 Pump designation : PES6A100D41ORS2676  
 Governor  
 Governor design. : RSV400...1100A2B2086  
 -1L

Customer-spec. information  
 Customer : JOHN DEERE

Engine : 6466 A

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Prestroke mm : 2,45...2,55  
 : (2,40...2,60)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 1100  
 -----  
 Contr.-rod trav.mm: 10,35  
 -----  
 Del.quantity cm3/ : 11,0...11,2  
 -----  
 Dispersion cm3/ : 0,35  
 -----  
 100H.: (0,60)  
 -----

2nd speed 1/min: 400  
 Contr.-rod trav. m: 5,3  
 Del.quantity cm3/ : 1,3...1,7  
 Dispersion cm3/ : 0,35  
 100H.: (0,55)

**SLEEVE POSITION**

Control-lever position  
 Degree: LOSE  
 Speed 1/min: 800  
 Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
 Notch setting x : -

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1100  
 Charge press. hPa : 600  
 Del.quantity cm3/ : 110,0...112,0  
 1000H.: (108,0...114,0)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 48...56

**Testing:**

1st c-rod trav.mm : 9,35  
 Speed 1/min : 1145...1155  
 2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1195...1225  
 4th speed 1/min : 1300  
 C-rod trav.mm : 0,3...1,7

**LOWEST RATED SPEED I**

Control-lever  
 position degrees: 24...32  
 Setting point w/out aux. spring  
 Speed 1/min : 400  
 Contr.-rod trav.mm: 4,7...4,9

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 5,2...5,4  
C-rod trav.mm : 2,0  
Speed 1/min : 600...660

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,35  
2nd speed 1/min : 750  
C-rod trav.mm : 11,65...11,85

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 210  
Contr.-rod trav.mm: 11,25...11,35

Measurement

Speed 1/min : 500

1st pressure hPa : 70  
C-rod trav.mm : 9,90...10,30  
C-rod trav.mm : 9,40

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 600  
Speed 1/min : 750  
Del.quantity cm3/ : 126,5...129,5  
1000H.: (124,0...132,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 87,5...90,5  
1000H.: (85,0...93,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,0 E1  
Edition : 7,86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 074  
Injection pump  
Pump designation : PES8A95D32ORS2624  
Governor  
Governor design. : RQV325...1400AB1149-2R

Customer-spec. information  
Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42  
Overflow valve : 1 417 413 019  
Inlet press., bar : 2.8  
Calibrating nozzle-holder assembly : 0 681 343 009  
Opening pressure, bar : 172...175

Test inj. tubing : 1 680 750 008

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,55...2,65  
: (2,50...2,70)  
Contr.-rod trav.mm : 10,5  
Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

F14

Tolerance + - ° : 270-315  
: 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400

Contr.-rod trav.mm: 11,3

Del.quantity cm3/ : 7,0...7,2

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 325

Contr.-rod trav. m: 7,1

Del.quantity cm3/ : 1,2...1,6

Dispersion cm3/ : 0,35

100H.: (0,60)

## SLEEVE POSITION

Control-lever position

Degree: MAX

Contr.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1400

Del.quantity cm3/ : 69,5...71,5

1000H.: (67,5...73,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 60..68

Testing:

1st c-rod trav.mm : 10,3

Speed 1/min: 1440...1450

2nd c-rod trav.mm : 4,0

Speed 1/min: 1525...1555

## LOWEST RATED SPEED I

Control-lever

position degrees: 7...15

Setting point w/out aux. spring

Speed 1/min: 325

Contr.-rod trav.mm: 7,0...7,2

Testing:

Speed 1/min: 100

C-rod trav.mm min: 9,4

C-rod trav.mm : 2,0

Speed 1/min: 630...690

## SWITCH-OVER POINT

Speed 1/min : 180...250

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del. quantity cm<sup>3</sup>/ : 56,0...59,0

1000H.: (54,0...61,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,0 E  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 075  
Injection pump  
Pump designation : PES8A95D320RS2624  
Governor  
Governor design. : RQV325...1400AB1149-3R

Customer-spec. information  
Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 019

Inlet press., bar : 2.8

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,55...2,65  
: (2,75...2,95)  
Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

Tolerance + - ° : 270-315  
: 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400

Contr.-rod trav.mm: 12,2

Del.quantity cm3/ : 7,8...8,0

Dispersion cm3/ : 0,60

2nd speed 1/min: 325

Contr.-rod trav. m: 7,1

Del.quantity cm3/ : 1,2...1,6

Dispersion cm3/ : 0,55

## SLEEVE POSITION

Control-lever position

Degree: MAX

Cont.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1400

Del.quantity cm3/ : 77,5...79,5

1000H.: (75,5...81,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 62,0...70,0

Testing:

1st c-rod trav.mm : 11,2

Speed 1/min : 1440...1450

2nd c-rod trav.mm : 4,0

Speed 1/min : 1550...1580

4th speed 1/min : 1630

C-rod trav.mm : 0...1,0

## LOWEST RATED SPEED I

Control-lever

position degrees: 7...15

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 7,0...7,2

Testing:

Speed 1/min : 100

C-rod trav.mm min : 9,1

C-rod trav.mm : 2,0

Speed 1/min : 630...690

## FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del. quantity cm<sup>3</sup>/ : 67,0...69,0  
1000H.: (65,0...71,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,0 C1  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 077  
 Injection pump  
 Pump designation : PES8A95D32ORS2620  
 Governor  
 Governor design. : RQV325...1400AB1207

Customer-spec. information  
 Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve  
 : 1 417 413 019

Inlet press., bar : 2.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 681 230 702

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 3,3...3,4  
 : (3,25...3,45)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

Tolerance + - ° : 270-315  
 : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400

Contr.-rod trav.mm: 11,40

Del.quantity cm3/ : 7,1...7,3

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 325

Contr.-rod trav. m: 7,0

Del.quantity cm3/ : 0,9...1,3

Dispersion cm3/ : 0,35

100H.: (0,60)

## SLEEVE POSITION

Control-lever position

Degree: MAX

Speed 1/min: 1600

Contr.-rod travelmm: 8,0

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1400

Del.quantity cm3/ : 71,0...73,0

1000H.: (69,0...75,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 59...67

Testing:

1st c-rod trav.mm : 10,4

Speed 1/min : 1445...1465

2nd c-rod trav.mm : 4,0

Speed 1/min : 1540...1580

4th speed 1/min : 1650

C-rod trav.mm : 0...1,4

## LOWEST RATED SPEED I

Control-lever

position degrees: 6...14

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 6,9...7,1

Testing:

Speed 1/min : 100

C-rod trav.mm min : 8,0

Speed 1/min : 225

C-rod trav.mm : 7,5...9,0  
C-rod trav.mm : 2,0  
Speed 1/min : 610...680

TORQUE CONTROL

Dimension a mm : 0,4  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 11,4  
2nd speed 1/min : 1200  
C-rod trav.mm : 11,5...11,7  
3rd speed 1/min : 840  
C-rod trav.mm : 11,8...11,9

SWITCH-OVER POINT

Speed 1/min : 120...190

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 840  
Del.quantity cm<sup>3</sup>/ : 58,0...61,0  
1000H.: (55,5...63,5)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H9  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 078  
Injection pump  
Pump designation : PES6A100D410RS2676-1  
Governor  
Governor design. : RSV500...900A1B2186-3L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
: (2,4...2,6)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 900  
-----  
Contr.-rod trav.mm: 10,9  
-----  
Del.quantity cm3/ : 11,8...12,0  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 500  
Contr.-rod trav. m: 4,9  
Del.quantity cm3/ : 1,2...1,6  
Dispersion cm3/ : 0,35  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 900  
Del.quantity cm3/ : 118,0...120,0  
1000H.: (116,0...122,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 42...50

## Testing:

1st c-rod trav.mm : 9,9  
Speed 1/min : 930...940  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 965...995  
4th speed 1/min : 1050  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 500  
Contr.-rod trav.mm: 4,4...4,6

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 500  
C-rod trav.mm : 4,9...5,1  
C-rod trav.mm : 2,0  
Speed 1/min : 560...620

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 900  
C-rod trav.mm : 10,9  
2nd speed 1/min : 650  
C-rod trav.mm : 12,1...12,3

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650  
Del.quantity cm3/ : 132,5...135,5  
1000H.: (130,0...138,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,0 C  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 079  
Injection pump  
Pump designation : PES8A95D32ORS2620  
Governor  
Governor design. : RQV325...1400AB1207-1R

Customer-spec. information  
Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 019  
Inlet press., bar : 2.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 702

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,3...3,4  
                  : (3,25...3,45)  
Contr.-rod trav.mm : 10,5  
Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing °CS: 0-45-90-135-180-225-

Tolerance + - ° : 270-315  
                  : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 11,75  
-----  
Del.quantity cm3/ : 7,5...7,7  
-----  
Dispersion cm3/ : 0,35  
-----  
                  100H.: (0,60)  
-----  
2nd speed 1/min: 325  
Contr.-rod trav. m: 7,2  
Del.quantity cm3/ : 0,9...1,3  
Dispersion cm3/ : 0,35  
                  100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: MAX  
Speed 1/min: 1600  
Contr.-rod travelmm: 8,0

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm3/ : 75,0...77,0  
                  1000H.: (73,0...79,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 59...67

## Testing:

1st c-rod trav.mm : 10,75  
Speed 1/min : 1445...1465  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1555...1595  
4th speed 1/min : 1650  
C-rod trav.mm : 0...1,4

## LOWEST RATED SPEED I

Control-lever  
position degrees: 7...15  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 7,1...7,3

## Testing:

Speed 1/min : 100  
C-rod trav.mm min : 8,0  
Speed 1/min : 225

C-rod trav.mm : 7,5...9,0  
C-rod trav.mm : 2,0  
Speed 1/min : 625...695

#### TORQUE CONTROL

Dimension a mm : 0,4  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 11,75  
2nd speed 1/min : 1200  
C-rod trav.mm : 11,9...12,1  
3rd speed 1/min : 845  
C-rod trav.mm : 12,15...12,35

#### SWITCH-OVER POINT

Speed 1/min : 120...190

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 845  
Del. quantity cm<sup>3</sup>/ : 63,5...66,5  
1000H.: (61,0...69,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 D1  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 080  
 Injection pump  
 Pump designation : PES6A95D420LS2551  
 Governor  
 Governor design. : RSV375...1100A0B2166  
 -1R

Customer-spec. information  
 Customer : CASE

Engine : A 504 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Calibrating-oil  
 return temp. °C : 38...42  
 Inlet press., bar : 1.5  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009  
 Opening  
 pressure, bar : 172...175  
 Test inj. tubing : 9 681 230 706  
 Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
 : (2,15...2,35)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
 -----  
 Contr.-rod trav.mm: 10,5  
 -----  
 Del.quantity cm3/ : 7,6...7,8  
 -----  
 Dispersion cm3/ : 0,35  
 -----  
 100H.: (0,55)  
 -----  
 2nd speed 1/min: 375  
 Contr.-rod trav. m: 7,8  
 Del.quantity cm3/ : 1,6...2,0  
 Dispersion cm3/ : 0,35  
 100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE  
 Speed 1/min: 800  
 Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
 Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1100  
 Del.quantity cm3/ : 76,0...78,0  
 1000H.: (74,0...80,0)

## HIGHEST RATED SPEED

1st version  
 Control-lever  
 position degrees: 42...50

## Testing:

1st c-rod trav.mm : 9,5  
 Speed 1/min : 1130...1150  
 2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1230...1250  
 3rd c-rod trav.mm : 2,0  
 Speed 1/min : 1275...1285  
 4th speed 1/min : 1350  
 C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
 position degrees: 36...44  
 Setting point w/out aux. spring  
 Speed 1/min : 375  
 Contr.-rod trav.mm: 7,7...7,9

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 670...730

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,50  
2nd speed 1/min : 700  
C-rod trav.mm : 11,80...12,00  
3rd speed 1/min : 600  
C-rod trav.mm : 12,15...12,25

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm<sup>3</sup>/ : 86,5...89,5  
1000H.: (84,0...92,0)  
Speed 1/min : 600  
Del.quantity cm<sup>3</sup>/ : 91,0...94,0  
1000H.: (89,0...96,0)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : CAS 5,5 B1  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 081  
 Injection pump  
 Pump designation : PES4A9SD320LS2612  
 Governor  
 Governor design. : RSV375...1100A0B2167  
 -2R

Customer-spec. information  
 Customer : CASE

Engine : A 336 BD

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Prestroke mm : 2,15...2,25  
 : (2,1...2,2)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-3-4-2

SD ang. spacing<sup>0</sup>CS: 0-90-180-270  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10,4

Del.quantity cm3/ : 8,8...9,0

Dispersion cm3/ : 0,35

100H.: (0,60)

2nd speed 1/min: 375

Contr.-rod trav. m: 7,1

Del.quantity cm3/ : 1,6...2,0

Dispersion cm3/ : 0,35

100H.: (0,55)

**SLEEVE POSITION**

Control-lever position  
 Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 88,0...90,0

1000H.: (86,0...90,0)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 39...47

Testing:

1st c-rod trav.mm : 9,4

Speed 1/min : 1130...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1210...1230

3rd c-rod trav.mm : 2,5

Speed 1/min : 1240...1250

4th speed 1/min : 1350

C-rod trav.mm : 0,3...1,7

**LOWEST RATED SPEED I**

Control-lever

position degrees: 22...30

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 7,0...7,2

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0  
Speed 1/min : 570...640

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,40  
2nd speed 1/min : 700  
C-rod trav.mm : 11,35...11,55  
3rd speed 1/min : 600  
C-rod trav.mm : 11,60...11,70

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 96,5...99,5  
1000H.: (94,0...102,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 100,0...103,0  
1000H.: (98,0...105,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 K2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 082  
Injection pump  
Pump designation : PES6A95D420LS2551  
Governor  
Governor design. : RSV375...1100A0B2170  
-2R

Customer-spec. information  
Customer : CASE

Engine : A 504 BD

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 9 681 273 009  
Inlet press., bar : 1.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 9 681 230 706  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,2...2,3  
: (2,15...2,35)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10,65  
-----  
Del.quantity cm3/ : 8,2...8,4  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 7,7  
Del.quantity cm3/ : 1,8...2,2  
Dispersion cm3/ : 0,35  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0  
Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm3/ : 81,5...83,5  
1000H.: (79,5...85,5)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 36...44

Testing:  
1st c-rod trav.mm : 9,65  
Speed 1/min : 1140...1105  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1250...1280

## LOWEST RATED SPEED I

Control-lever  
position degrees: 19...27  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 7,1...7,3

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0

Speed 1/min : 375  
C-rod trav.mm : 7,6...7,8  
C-rod trav.mm : 2,0  
Speed 1/min : 670...730

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,65  
2nd speed 1/min : 800  
C-rod trav.mm : 10,95...11,15  
3rd speed 1/min : 600  
C-rod trav.mm : 11,20...11,30

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700  
Del.quantity cm3/ : 81,5...84,5  
1000H.: (79,0...87,0)  
Speed 1/min : 600  
Del.quantity cm3/ : 81,0...84,0  
1000H.: (79,0...86,0)

Remarks:

5000000000

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CAS 8,3 A2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 9 400 230 083  
  
Injection pump  
Pump designation : PES6A100D420LS3024  
Governor  
Governor design. : RSV375...1100A2B798-1R

Customer-spec. information  
Customer : CASE

Engine : A-504 BDT

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 9 681 273 009

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 706

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,00...2,10  
: (1,95...2,15)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10,9  
-----  
Del.quantity cm<sup>3</sup>/ : 12,5...12,7  
-----  
Dispersion cm<sup>3</sup>/ : 0,35  
-----  
100H.: (0,60)  
-----  
2nd speed 1/min: 375  
Contr.-rod trav. m: 6,0  
Del.quantity cm<sup>3</sup>/ : 1,8...2,2  
Dispersion cm<sup>3</sup>/ : 0,35  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Del.quantity cm<sup>3</sup>/ : 125,0...127,0  
1000H.: (123,0...129,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 46...54

Testing:  
1st c-rod trav.mm : 9,9  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1200...1230  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 375  
Contr.-rod trav.mm: 5,4...5,6

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 375  
C-rod trav.mm : 5,9...6,1  
C-rod trav.mm : 2,0  
Speed 1/min : 490...550

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10,90  
2nd speed 1/min : 750  
C-rod trav.mm : 11,70...11,90

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 133,0...136,0  
1000H.: (130,0...138,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 H5  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 085  
Injection pump  
Pump designation : PES6A100D41ORS2676-1  
Governor  
Governor design. : RSV450...1100A2C2204  
L

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010  
Inlet press., bar : 1.5  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 008  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,45...2,55  
: (2,40...2,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 9,8

Del.quantity cm<sup>3</sup>/ : 10,3...10,5

Dispersion cm<sup>3</sup>/ : 0,35

100H.: (0,60)

2nd speed 1/min: 450

Contr.-rod trav. m: 5,1

Del.quantity cm<sup>3</sup>/ : 1,3...1,7

Dispersion cm<sup>3</sup>/ : 0,35

100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm<sup>3</sup>/ : 103,0...105,0

1000H.: (101,0...107,0)

## HIGHEST RATED SPEED

1st version

Control-lever  
position degrees: 45...53

Testing:

1st c-rod trav.mm : 8,8

Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1210...1240

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 22...30

Setting point w/out aux. spring

Speed 1/min : 450

Contr.-rod trav.mm: 4,5...4,7

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 450  
C-rod trav.mm : 5,0...5,2  
C-rod trav.mm : 2,0  
Speed 1/min : 600...660

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 9,8  
2nd speed 1/min : 650  
C-rod trav.mm : 10,4...10,6

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650  
Del.quantity cm3/ : 108,0...111,0  
1000H.: (105,5...113,5)

Remarks:

# BOSCH INJ. PUM<sup>A</sup> TEST SPECIFICATIONS

Note inst. in ~~French~~ column

Test sheet : IHC 9,3 51  
Edition : 7,86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 086  
Injection pump  
Pump designation : PES8A95D32ORS2708  
Governor  
Governor design. : RQV325...1400AB1213R

Customer-spec. information  
Customer : IHC

Engine : D9L

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 019

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 702

Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

## START OF DELIVERY

Prestroke mm : 3,3...3,4  
                  : (3,25...3,45)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

Tolerance + - ° : 270-315  
                  : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 11,0...11,1  
-----  
Del.quantity cm3/ : 6,4...6,6  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)  
-----

2nd speed 1/min: 350  
Contr.-rod trav. m: 6,7...6,9  
Del.quantity cm3/ : 0,9...1,3  
Dispersion cm3/ : 0,35  
100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
Degree: MAX.  
Speed 1/min: 1450  
Contr.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm3/ : 64,0...66,0  
1000H.: (62,0...68,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 63,5...68,5

Testing:  
1st c-rod trav.mm : 10,0  
Speed 1/min : 1450...1460  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1550...1580  
4th speed 1/min : 1650  
C-rod trav.mm : 0...1,0

## LOWEST RATED SPEED I

Control-lever  
position degrees: 7...15  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 6,7...6,9

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0  
C-rod trav.mm : 2,0

Speed 1/min : 630...690

TORQUE CONTROL

Dimension a mm : 0,40

Torque-control curve - 1st version

1st speed 1/min : 1400

C-rod trav.mm : 11,4

2nd speed 1/min : 1200

C-rod trav.mm : 11,5...11,7

3rd speed 1/min : 840

C-rod trav.mm : 11,8...11,9

SWITCH-OVER POINT

Speed 1/min : 180...250

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 840

Del. quantity cm<sup>3</sup>/ : 55,0...58,0

1000H.: (52,5...60,5)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : IHC 9,0 D  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 230 087  
 Injection pump  
 Pump designation : PES8A95D32ORS2708  
 Governor  
 Governor design. : RQV325...1400AB1213-1R

Customer-spec. information  
 Customer : IHC

Engine : D9L

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 019

Inlet press., bar : 2.8

Calibrating nozzle-holder assembly : 0 681 343 009

Opening pressure, bar : 172...175

Test inj. tubing : 9 681 230 702

Outside diameter x Wall thickness x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values -----

**START OF DELIVERY**

Prestroke mm : 3,30...3,40  
 : (3,25...3,45)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-8-7-3-6-5-4-2

SD ang. spacing°CS: 0-45-90-135-180-225-

G08

Tolerance + - ° : 270-315  
 : 0,5(0,75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 1400  
 -----  
 Contr.-rod trav.mm: 11,4...11,5  
 -----  
 Del.quantity cm3/ : 7,3...7,5  
 -----  
 Dispersion cm3/ : 0,35  
 -----  
 100H.: (0,60)  
 -----

2nd speed 1/min: 350  
 Contr.-rod trav. m: 6,7...6,9  
 Del.quantity cm3/ : 0,9...1,3  
 Dispersion cm3/ : 0,35  
 100H.: (0,55)

**SLEEVE POSITION**

Control-lever position  
 Degree: MAX  
 Cont.-rod travelmm: 15,2...17,8

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1400  
 Del.quantity cm3/ : 73,0...75,0  
 1000H.: (71,0...77,0)

**HIGHEST RATED SPEED**

1st version  
 Control-lever position degrees: 61,5...66,5

**Testing:**

1st c-rod trav.mm : 10,4  
 Speed 1/min : 1450...1460  
 2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1555...1585  
 4th speed 1/min : 1650  
 C-rod trav.mm : 0,0...1,0

**LOWEST RATED SPEED I**

Control-lever position degrees: 8...16  
 Setting point w/out aux. spring  
 Speed 1/min : 350  
 Contr.-rod trav.mm: 6,7...6,9

**Testing:**

Speed 1/min : 100  
 C-rod trav.mm min : 8,0  
 C-rod trav.mm : 2,0  
 Speed 1/min : 630...690

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1400  
C-rod trav.mm : 11,75  
2nd speed 1/min : 1200  
C-rod trav.mm : 11,90...12,10  
3rd speed 1/min : 845  
C-rod trav.mm : 12,15...12,35

SWITCH-OVER POINT

Speed 1/min : 150...190

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 840  
Del.quantity cm3/ : 62,5...65,5  
1000H.: (60,0...68,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CUM 8,3 B  
Edition : 9.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 230 103  
Injection pump  
Pump designation : PES6A100D320/3RS2691  
-2  
EP type number : 9 410 230 028  
Governor  
Governor design. : RQV350...1100AB1227R  
Governor no. : 9 420 231 015

Customer-spec. information  
Customer : CUMMINS

Engine : 6 CT 8,3

1st version kW : 156.6  
Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 047

Inlet press., bar : 1.4

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

G10

Prestroke mm : 2,80...2,90  
                  : (2,75...2,95)  
Contr.-rod trav.mm: 9,0...12,0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : i

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 12,8...12,9  
-----  
Del.quantity cm3/ : 13,1...13,2  
-----  
100H.: (12,9...13,5)  
-----  
Dispersion cm3/ : 0,35  
-----  
100H.: (0,60)

2nd speed 1/min: 350  
Contr.-rod trav. m: 5,6...5,8  
Del.quantity cm3/ : 1,8...2,2  
100H.: (1,6...2,5)  
Dispersion cm3/ : 0,35  
100H.: (0,55)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 1,5...1,9  
2nd speed 1/min: 500  
Sleeve travel mm: 3,3...3,6  
3rd speed 1/min: 800  
Sleeve travel mm: 5,0...5,3  
4th speed 1/min: 1160  
Sleeve travel mm: 8,1...8,2

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 670  
Del.quantity cm3/ : 130,5...132,5  
1000H.: (128,5...134,5)  
Dispersion cm3/ : 3,5  
1000H.: (6,0)

## HIGHEST RATED SPEED

1st version

Control-lever  
position degrees: 58,5...63,5

Testing:  
1st c-rod trav.mm : 11,8  
Speed 1/min : 1150...1160  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1275...1305  
4th speed 1/min : 1350  
C-rod trav.mm : 0...1,0

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 9...17  
Speed 1/min : 350  
C-rod trav.mm : 5,6...5,8  
C-rod trav.mm : 2,0  
Speed 1/min : 485...545

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 670  
Contr.-rod trav.mm: 12,8...12,9

#### Measurement

Speed 1/min : 500  
C-rod trav.mm : 10,15...10,35  
2nd pressure hPa : 535  
C-rod trav.mm : 12,1...12,2  
3rd pressure hPa : 387  
C-rod trav.mm : 10,65...11,05

#### SWITCH-OVER POINT

Speed 1/min : 230...290

#### FUEL-DELIVERY CHARACTERISTICS

##### 1st version

Charge press. hPa : 670  
Speed 1/min : 750  
Del.quantity cm3/ : 128,5...132,5  
1000H.: (126,0...134,0)  
Dispersion cm3/ : -  
1000H.: -  
Speed 1/min : 500  
Del.quantity cm3/ : 79,0...83,0  
1000H.: (77,0...85,0)  
Dispersion cm3/ : -  
1000H.: -

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 A4  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 231 042  
 Injection pump : PES6P110A72ORS361  
 Pump designation : PES6P110A72ORS361  
 Governor : RSV450...1100P2/467  
 Governor design : RSV450...1100P2/467

Customer-spec. information  
 Customer : JOHN DEERE

Engine : 6466 AT

## TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 010  
 Inlet press., bar : 1.5  
 Calibrating nozzle-holder assembly : 0 681 343 009

Opening pressure, bar : 175

Test inj. tubing : 1 680 750 015

Outside diameter x Wall thickness x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values -----

START OF DELIVERY  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing °CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

G12

1st speed 1/mi: 1050  
 -----  
 Contr.-rod trav.mm: 10,9  
 -----  
 Del.quantity cm3/ : 13,7...13,9  
 -----  
 Dispersion cm3/ : 0,40  
 -----  
 100H.: (0,70)  
 -----

2nd speed 1/min: 450  
 Contr.-rod trav. m: 5,5  
 Del.quantity cm3/ : 0,9...1,5  
 Dispersion cm3/ : 0,60

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
 Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1050  
 Charge press. hPa : 670  
 Del.quantity cm3/ : 137,0...139,0  
 1000H.: (134,0...142,0)

## HIGHEST RATED SPEED

1st version  
 Control-lever position degrees: 42...50

Testing:  
 1st c-rod trav.mm : 9,9  
 Speed 1/min : 1095...1105  
 2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1200...1230  
 4th speed 1/min : 1300  
 C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever position degrees: 18...26  
 Setting point w/out aux. spring  
 Speed 1/min : 450  
 Contr.-rod trav.mm: 5,0

Testing:  
 Speed 1/min : 100  
 C-rod trav.mm min : 19,0  
 Speed 1/min : 450  
 C-rod trav.mm : 5,5  
 C-rod trav.mm : 2,0  
 Speed 1/min : 635...695

Speed 1/min : 850  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 10,85...10,95  
2nd speed 1/min : 900  
C-rod trav.mm : 11,10...11,20  
3rd speed 1/min : 850  
C-rod trav.mm : 10,85...11,15  
4th speed 1/min : 650  
C-rod trav.mm : 11,55...11,65  
5th speed 1/min : 550  
C-rod trav.mm : 8,85...8,95

compensator (LDA,ADA,ALDA)

#### 1st version

Setting

Speed 1/min : 500  
Pressure hPa : 410  
Contr.-rod trav.mm: 10,85...10,95

#### Measurement

Speed 1/min : 500

1st pressure hPa : 180  
C-rod trav.mm : 9,40...9,80

#### FUEL-DELIVERY CHARACTERISTICS

##### 1st version

Charge press. hPa : 670  
Speed 1/min : 650  
Del.quantity cm3/ : 150,0...153,0  
1000H.: (147,0...157,0)  
Speed 1/min : 550  
Del.quantity cm3/ : 86,0...94,0  
1000H.: (85,0...95,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 G2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 084  
Injection pump  
Pump designation : PES6P110A72ORS3083-1  
Governor  
Governor design. : RSV425...1100P2/489

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 456 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 271 022

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
                  : (3,40...3,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

G14

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 12,0

Del.quantity cm<sup>3</sup>/ : 37,8...40,0

Dispersion cm<sup>3</sup>/ : 0,40

2nd speed 1/min: 425

Contr.-rod trav. m: 6,5

Del.quantity cm<sup>3</sup>/ : 1,1...1,6

Dispersion cm<sup>3</sup>/ : 0,45

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 1200

Del.quantity cm<sup>3</sup>/ : 137,5...139,5  
1000H.: (134,5...142,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 11,0

Speed 1/min : 1155...1165

2nd c-rod trav.mm : 4,0

Speed 1/min : 1230...1260

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,4

## LOWEST RATED SPEED I

Control-lever

position degrees: 21...29

Setting point w/out aux. spring

Speed 1/min : 425

Contr.-rod trav.mm: 5,9...6,1

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 425

C-rod trav.mm : 6,4...6,6

C-rod trav.mm : 2,0  
Speed 1/min : 655...715

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 12,0

2nd speed 1/min : 700

C-rod trav.mm : 13,10...13,30

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 370

Contr.-rod trav.mm: 11,25...11,35

Measurement

Speed 1/min : 500

1st pressure hPa : 200

C-rod trav.mm : 10,10...10,50

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200

Speed 1/min : 700

Del.quantity cm3/ : 155,5...159,5

1000H.: (152,5...162,5)

Speed 1/min : 500

Del.quantity cm3/ : 105,0...109,0

1000H.: (102,0...112,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 G3  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 231 084  
 Injection pump  
 Pump designation : PES6P110A72ORS3083-7  
 Governor  
 Governor design. : RSV425...1100P2A489

Customer-spec. information  
 Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 456 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 681 271 022

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
 : (3,40...3,60)  
 Contr.-rod trav.mm: 10,5  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 12,0

Del.quantity cm3/ : 13,8...14,0

Dispersion cm3/ : 0,40

2nd speed 1/min: 425

Contr.-rod trav. m: 6,5

Del.quantity cm3/ : 1,1...1,6

Dispersion cm3/ : 0,45

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 137,5...139,5

1000H.: (134,5...142,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 11,0

Speed 1/min : 1155...1165

2nd c-rod trav.mm : 4,0

Speed 1/min : 1230...1260

4th speed 1/min : 1350

C-rod trav.mm : 0,3...1,4

## LOWEST RATED SPEED I

Control-lever

position degrees: 21...29

Setting point w/out aux. spring

Speed 1/min : 425

Contr.-rod trav.mm: 5,9...6,1

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0

Speed 1/min : 425

C-rod trav.mm : 6,4...6,6

C-rod trav.mm : 2,0

Speed 1/min : 655...715

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 12,0...12,1

2nd speed 1/min : 700

C-rod trav.mm : 13,10...13,30

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 370

Contr.-rod trav.mm : 12,45...12,55

Measurement

Speed 1/min : 500

1st pressure hPa : 200

C-rod trav.mm : 11,4...11,8

C-rod trav.mm : 10,9...11,1

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200

Speed 1/min : 700

Del.quantity cm<sup>3</sup>/ : 155,5...159,5

1000H.: (152,5...162,5)

Speed 1/min : 500

Del.quantity cm<sup>3</sup>/ : 105,0...109,0

1000H.: (102,0...112,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 10,1 B1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 098  
Injection pump  
Pump designation : PES6P110A72ORS3086  
Governor  
Governor design. : RSV400...1050PO/492

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6619 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
                  : (3,40...3,60)  
Contr.-rod trav.,mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.,mm: 13,9

Del.quantity cm3/ : 21,3...21,5

Dispersion cm3/ : 0,40

2nd speed 1/min: 400

Contr.-rod trav. m: 6,1

Del.quantity cm3/ : 1,9...2,5

Dispersion cm3/ : 0,40

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Charge press. hPa : 100

Del.quantity cm3/ : 213,5...215,5  
1000H.: (210,5...218,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 38...46

Testing:

1st c-rod trav.,mm : 12,9

Speed 1/min : 1090...1100

2nd c-rod trav.,mm : 4,0

Speed 1/min : 1185...1215

4th speed 1/min : 0,3...1,7

C-rod trav.,mm : 1280

## LOWEST RATED SPEED I

Control-lever

position degrees: 17...25

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.,mm: 5,5...5,7

Speed 1/min : 400

C-rod trav.,mm : 6,0...6,2

C-rod trav.,mm : 2,0

Speed 1/min : 540...600

## TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 13,9  
2nd speed 1/min : 700  
C-rod trav.mm : 14,35...14,65

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 48  
Contr.-rod trav.mm: 13,65...13,75

Measurement

Speed 1/min : 500

1st pressure hPa : 27  
C-rod trav.mm : 12,10...12,50

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 100  
Speed 1/min : 700  
Del.quantity cm3/ : 223,5...226,5  
1000H.: (220,0...230,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 142,5...145,5  
1000H.: (139,0...149,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 15,6 B1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 102  
Injection pump  
Pump designation : PES8P110A12ORS3089  
Governor  
Governor design. : RSV425...1050P2/494

Customer-spec. information  
Customer : JOHN DEERE

Engine : 8955 A

1st version kW : 270  
Speed 1/min: 2100

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-6-3-4-2-7-8

SD ang. spacing<sup>o</sup>CS: 0-45-90-135-180-225-  
270-315  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 8

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 11,3

Del.quantity cm3/ : 16,8...17,0

Dispersion cm3/ : 0,40

2nd speed 1/min: 425

Contr.-rod trav. m: 4,5

Del.quantity cm3/ : 1,2...1,7

Dispersion cm3/ : 0,45

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Charge press. hPa : 670

Del.quantity cm3/ : 168,0...170,0  
1000H.: (166,0...172,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 44...52

Testing:

1st c-rod trav.mm : 10,3

Speed 1/min : 1095...1105

2nd c-rod trav.mm : 4,0

Speed 1/min : 1170...1200

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 21...29

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 3,9...4,1

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 4,4...4,6  
C-rod trav.mm : 2,0  
Speed 1/min : 580...640

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 11,30  
2nd speed 1/min : 750  
C-rod trav.mm : 12,15...12,45

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 550  
Pressure hPa : 380  
Contr.-rod trav.mm: 11,50...11,60

Measurement

Speed 1/min : 550

1st pressure hPa : 240  
C-rod trav.mm : 10,70...11,10

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 670  
Speed 1/min : 750  
Del.quantity cm3/ : 181,5...184,5  
1000H.: (178,5...187,5)  
Speed 1/min : 550  
Del.quantity cm3/ : 125,0...129,0  
1000H.: (123,0...132,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : IHC 9,4 A2  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 9 400 231 114  
 Injection pump  
 Pump designation : PES8P100A921/5RS286  
 Governor  
 Governor design. : RQV350...1200PA643K

## Customer-spec. information

Customer : IHC  
 Engine : DVT 800

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 040  
 Inlet press., bar : 2.8  
 Calibrating nozzle-holder  
 assembly : 1 688 901 017  
 Opening  
 pressure, bar : 207...210  
 Perforated-plate  
 diameter mm : 0,6  
 Test inj. tubing : 9 681 230 713  
 Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x1000

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2,7...2,8  
 Cam sequence : 1-8-4-2-7-3-6-5

SD ang. spacing°CS: 0-45-90-135-180-225-

G22

Tolerance + - ° : 270-315  
 : 0,5(0,75)

## BASIC SETTING

1st speed 1/mi: 1200  
 -----  
 Contr.-rod trav.mm: 11,0  
 -----  
 Del.quantity cm3/ : 12,5...12,7  
 -----  
 Dispersion cm3/ : 0,40  
 -----  
 100H.: (0,60)  
 -----  
 2nd speed 1/min: 350  
 Contr.-rod trav. m: 5,0  
 Del.quantity cm3/ : 1,8...2,2  
 Dispersion cm3/ : 0,50  
 100H.: (0,55)

## SLEEVE POSITION

Control-lever position  
 Degree: MAX  
 Speed 1/min: 1200  
 Cont.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1200  
 Charge press. hPa : 930  
 Del.quantity cm3/ : 125,0...127,0  
 1000H.: (123,0...129,0)

## HIGHEST RATED SPEED

1st version  
 Control-lever  
 position degrees: 61,5...66,5

## Testing:

1st c-rod trav.mm : 10,0  
 Speed 1/min : 1240...1250  
 2nd c-rod trav.mm : 4,0  
 Speed 1/min : 1315...1345  
 4th speed 1/min : 1390  
 C-rod trav.mm : 0...1,0

## LOWEST RATED SPEED I

Control-lever  
 position degrees: 9,5...14,5  
 Setting point w/out aux. spring  
 Speed 1/min : 350  
 Contr.-rod trav.mm: 4,9...5,1

## Testing:

Speed 1/min : 350  
 C-rod trav.mm min : 5,0  
 Speed 1/min : 285  
 C-rod trav.mm : 5,8...7,2

C-rod trav.mm : 2,0  
Speed 1/min : 640...700

#### TORQUE CONTROL

Dimension a mm : 0,05  
Torque-control curve - 1st version  
1st speed 1/min : 1200  
C-rod trav.mm : 11,0  
2nd speed 1/min : 900  
C-rod trav.mm : 10,95...11,05

compensator (LDA,ADA,ALDA)

1st version

Setting  
Speed 1/min : 800  
Pressure hPa : 160  
Contr.-rod trav.mm: \*

#### SWITCH-OVER POINT

Speed 1/min : 220...280

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 930  
Speed 1/min : 900  
Del.quantity cm3/ : 120,0...126,0  
1000H.: (119,0...127,0)  
Speed 1/min : 800  
Del.quantity cm3/ : 86,5...94,5

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 15,6 C  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 160  
Injection pump  
Pump designation : PES8P120A320/3RS6014  
Governor  
Governor design. : RSV400...1050P0/502

Customer-spec. information  
Customer : JOHN DEERE

Engine : 8955 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 1 688 901 017

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,6

Test inj. tubing : 1 680 750 067

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x1000

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
                  : (3,40...3,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-6-3-4-2-7-8

SD ang. spacing°CS: 0-45-90-135-180-225-  
  270-315  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 8

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 12,6

Del.quantity cm3/ : 24,5...24,7

Dispersion cm3/ : 0,50

100H.: (0,90)

2nd speed 1/min: 400

Contr.-rod trav. m: 4,5

Del.quantity cm3/ : 1,8...2,4

Dispersion cm3/ : 0,80

100H.: (1,20)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Cont.-rod trav. mm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Charge press. hPa : 1070

Del.quantity cm3/ : 245,0...247,0

1000H.: (242,0...250,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 41...49

Testing:

1st c-rod trav.mm : 11,6

Speed 1/min : 1090...1100

2nd c-rod trav.mm : 4,0

Speed 1/min : 1160...1190

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 3,9...4,1

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 4,4...4,6  
C-rod trav.mm : 2,0  
Speed 1/min : 480...540

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 550  
Pressure hPa : 710  
Contr.-rod trav.mm: 12,35...12,45

Measurement

Speed 1/min : 550  
C-rod trav.mm : 11,20  
2nd pressure hPa : 530  
C-rod trav.mm : 11,40...11,800

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1070  
Speed 1/min : 750  
Speed 1/min : 550  
Del.quantity cm3/ : 182,0...188,0  
1000H.: (179,0...191,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 15,6 B  
Edition : 7.86  
Superceeded : -  
Combination no. : 9 400 231 189  
Injection pump  
Pump designation : PES8P110A12ORS3089  
Governor  
Governor design. : RSV425...1050P2/494-  
Governor design. : 2

Customer-spec. information  
Customer : JOHN DEERE

Engine : 8955 A

1st version kW : 270  
Speed 1/min: 2100

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
: (3,40...3,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-6-3-4-2-7-8

SD ang. spacing°CS: 0-45-90-135-180-225-  
270-315  
Tolerance + - ° : 0,5(0,75)

SD mark cyl. no. : 8

## BASIC SETTING

1st speed 1/mi: 1050  
-----  
Contr.-rod trav.mm: 11,3  
-----  
Del.quantity cm3/ : 16,8...17,0  
-----  
Dispersion cm3/ : 0,40  
-----  
100H.: (0,75)  
-----  
2nd speed 1/min: 425  
Contr.-rod trav. m: 4,5  
Del.quantity cm3/ : 1,2...1,7  
Dispersion cm3/ : 0,45  
100H.: (0,75)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Cont.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Charge press. hPa : 670  
Del.quantity cm3/ : 168,0...170,0  
1000H.: (165,0...173,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 44...52

## Testing:

1st c-rod trav.mm : 10,3  
Speed 1/min : 1095...1105  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1185...1195  
4th speed 1/min : 1300  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 23...31  
Setting point w/out aux. spring  
Speed 1/min : 425

Contr.-rod trav.mm: 3,9...4,1  
Speed 1/min : 425  
C-rod trav.mm : 4,4...4,6  
C-rod trav.mm : 2,0  
Speed 1/min : 550...610

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1050  
C-rod trav.mm : 11,3  
2nd speed 1/min : 700  
C-rod trav.mm : 12,85...13,05

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 550  
Pressure hPa : 480  
Contr.-rod trav.mm: 12,40...12,50

#### Measurement

Speed 1/min : 550  
1st pressure hPa : 140  
C-rod trav.mm : 10,15...10,55  
C-rod trav.mm : 9,3

#### FUEL-DELIVERY CHARACTERISTICS

##### 1st version

Charge press. hPa : 670  
Speed 1/min : 700  
Del.quantity cm3/ : 195,0...199,0  
1000H.: (192,0...202,0)  
Speed 1/min : 550  
Del.quantity cm3/ : 125,0...129,0  
1000H.: (122,0...132,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 G6  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 195  
Injection pump  
Pump designation : PES6P110A72ORS3083-1  
Governor  
Governor design. : RSV400...900P7A455-2

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 AF

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
: (3,40...3,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

G28

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 800  
-----  
Contr.-rod trav.mm: 12,9  
-----  
Del.quantity cm3/ : 17,9...18,2  
-----  
Dispersion cm3/ : 0,40  
-----  
100H.: (0,75)  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 5,5  
Del.quantity cm3/ : 0,8...1,3  
Dispersion cm3/ : 0,45  
100H.: (0,75)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0  
Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 800  
Del.quantity cm3/ : 178,5...181,5  
100DH.: (176,0...184,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 53...61

Testing:  
1st c-rod trav.mm : 11,9  
Speed 1/min : 915...925  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 965...995  
4th speed 1/min : 1050  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 24...32  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 4,9...5,1

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0

Speed 1/min : 400  
C-rod trav.mm : 5,4...5,6  
C-rod trav.mm : 2,0  
Speed 1/min : 500...560

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 G4  
Edition : 7.86  
Superceeded : -  
Combination no. : 9 400 231 196  
Injection pump  
Pump designation : PES6P110A720RS3038  
Governor  
Governor design. : RSV400...1050P2A488-  
Governor design. : 3

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 AF

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 705

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
                  : (3,4...3,6)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

H02

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 12,4

Del.quantity cm3/ : 14,7...15,0

Dispersion cm3/ : 0,40

100H.: (0,75)

2nd speed 1/min: 400

Contr.-rod trav. m: 6,7

Del.quantity cm3/ : 1,4...1,9

Dispersion cm3/ : 0,45

100H.: (0,75)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Charge press. hPa : 1200

Del.quantity cm3/ : 146,0...149,0

1000H.: (144,0...152,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 41...49

Testing:

1st c-rod trav.mm : 11,4

Speed 1/min : 1095...1105

2nd c-rod trav.mm : 4,0

Speed 1/min : 1185...1215

4th speed 1/min : 1300

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 6,1...6,3

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 6,6...6,8  
C-rod trav.mm : 2,0  
Speed 1/min : 660...720

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 12,40  
2nd speed 1/min : 700  
C-rod trav.mm : 13,55...13,85

compensator (LDA,ADA,ALDA)

#### 1st version

Setting

Speed 1/min : 500  
Pressure hPa : 670  
Contr.-rod trav.mm: 12,85...12,95

#### Measurement

Speed 1/min : 500  
C-rod trav.mm : 10,44  
2nd pressure hPa : 310  
C-rod trav.mm : 11,20...11,60

#### FUEL-DELIVERY CHARACTERISTICS

#### 1st version

Charge press. hPa : 1200  
Speed 1/min : 700  
Del.quantity cm3/ : 179,0...183,0  
1000H.: (176,0...186,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 91,0...95,0  
1000H.: (88,0...98,0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 7,6 G5  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 197  
Injection pump  
Pump designation : PES6P110A72ORS3083-1  
Governor  
Governor design. : RSV600...1100P2/489-  
1

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6466 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 705

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
: (3,40...3,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 12,4

Del.quantity cm3/ : 14,6...14,9

Dispersion cm3/ : 0,40

100H.: (0,75)

2nd speed 1/min: 600

Contr.-rod trav. m: 6,3

Del.quantity cm3/ : 2,3...2,8

Dispersion cm3/ : 0,50

100H.: (0,75)

## SLEEVE POSITION

Control-lever position

Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 1200

Del.quantity cm3/ : 146,0...149,0

1000H.: (143,5...151,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 47...55

Testing:

1st c-rod trav.mm : 11,4

Speed 1/min : 1145...1155

2nd c-rod trav.mm : 4,0

Speed 1/min : 1245...1275

4th speed 1/min : 1350

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 27...35

Setting point w/out aux. spring

Speed 1/min : 600

Contr.-rod trav.mm: 5,7...5,9

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 600  
C-rod trav.mm : 6,2...6,4  
C-rod trav.mm : 2,0  
Speed 1/min : 790...850

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 12,4  
2nd speed 1/min : 950  
C-rod trav.mm : 12,85...13,05  
3rd speed 1/min : 850  
C-rod trav.mm : 13,15...13,35

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 570  
Contr.-rod trav.mm: 12,25...12,35

Measurement

Speed 1/min : 500

1st pressure hPa : 240  
C-rod trav.mm : 9,70...10,10

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200  
Speed 1/min : 850  
Del.quantity cm<sup>3</sup>/ : 162,0...166,0  
1000H.: (159,0...169,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 10,1 C2  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 204  
Injection pump  
Pump designation : PES6P110A72ORS3144  
Governor  
Governor design. : RSV400...1050POA492-  
2

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6619 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 271 004

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
: (3,40...3,50)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 13,6...13,7

Del.quantity cm<sup>3</sup>/ : 21,7...22,0

Dispersion cm<sup>3</sup>/ : 0,40

100H.: (0,75)

2nd speed 1/min: 400

Contr.-rod trav. m: 5,8...6,0

Del.quantity cm<sup>3</sup>/ : 2,0...2,5

Dispersion cm<sup>3</sup>/ : 0,45

100H.: (0,75)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Charge press. hPa : 1200

Del.quantity cm<sup>3</sup>/ : 216,5...219,5

1000H.: (214,0...222,0)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 41...49

Testing:

1st c-rod trav.mm : 12,6

Speed 1/min : 1100...1110

2nd c-rod trav.mm : 4,0

Speed 1/min : 1170...1200

4th speed 1/min : 1280

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 5,3...5,5

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 5,8...6,0  
C-rod trav.mm : 2,0  
Speed 1/min : 535...595

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 13,5...13,7  
2nd speed 1/min : 750  
C-rod trav.mm : 14,4...14,6

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200  
Speed 1/min : 750  
Del. quantity cm<sup>3</sup>/ : 229,0...233,0  
1000H.: (226,0...236,0)  
Speed 1/min : 500  
1000H.: (155,0...165,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 10,1 C1  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 204  
Injection pump  
Pump designation : PES6P110A72ORS3144  
Governor  
Governor design. : RSV400...1050PO/492-2

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6619 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 9 681 230 705

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
                  : (3,4...3,5)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 13,6

Del.quantity cm3/ : 21,7...22,0

Dispersion cm3/ : 0,40

100H.: (0,75)

2nd speed 1/min: 400

Contr.-rod trav. m: 5,8

Del.quantity cm3/ : 2,0...2,5

Dispersion cm3/ : 0,45

100H.: (0,75)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload

Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Charge press. hPa : 1200

Del.quantity cm3/ : 216,5...219,5  
1000H.: (214,0...222,0)

Dispersion cm3/ : 4,0

1000H.: (7,5)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 41...49

Testing:

1st c-rod trav.mm : 12,6

Speed 1/min : 1100...1110

2nd c-rod trav.mm : 4,0

Speed 1/min : 1170...1200

4th speed 1/min : 1280

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 19...27

Setting point w/out aux. spring

Speed 1/min : 400

Contr.-rod trav.mm: 5,2...5,4

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400  
C-rod trav.mm : 5,7...5,9  
C-rod trav.mm : 2,0  
Speed 1/min : 535...595

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 13,60  
2nd speed 1/min : 750  
C-rod trav.mm : 14,30...14,40

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 720  
Contr.-rod trav.mm: 13,95...14,05

Measurement

Speed 1/min : 500  
C-rod trav.mm : 11,30  
2nd pressure hPa : 240  
C-rod trav.mm : 12,00...12,40

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200  
Speed 1/min : 750  
Del.quantity cm3/ : 229,0...233,0  
1000H.: (226,0...236,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 158,0...162,0  
1000H.: (155,0...165,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 10,1 C  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 400 231 215  
Injection pump  
Pump designation : PES6P110A72ORS3144  
Governor  
Governor design. : RSV400...1050POA513

Customer-spec. information  
Customer : JOHN DEERE

Engine : 6619 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 457 413 010

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00X1,50X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3,45...3,55  
                  : (3,40...3,60)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

H10

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050  
-----  
Contr.-rod trav.mm: 12,9...13,0  
-----  
Del.quantity cm3/ : 21,7...22,0  
-----  
Dispersion cm3/ : 0,40  
-----  
2nd speed 1/min: 400  
Contr.-rod trav. m: 5,1...5,3  
Del.quantity cm3/ : 2,0...2,5  
Dispersion cm3/ : 0,45

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Charge press. hPa : 1200  
Del.quantity cm3/ : 216,5...219,5  
1000H.: (214,0...222,0)  
Dispersion cm3/ : 4,0

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 41...49

Testing:  
1st c-rod trav.mm : 11,9  
Speed 1/min : 1100...1110  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1160...1190  
4th speed 1/min : 1280  
C-rod trav.mm : 0,3...1,4

## LOWEST RATED SPEED 1

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 400  
Contr.-rod trav.mm: 4,6...4,8

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0  
Speed 1/min : 400

C-rod trav.mm : 5,1...5,3  
C-rod trav.mm : 2,0  
Speed 1/min : 505...565

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050  
C-rod trav.mm : 12,9...13,0  
2nd speed 1/min : 750  
C-rod trav.mm : 13,8...14,0

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 720  
Contr.-rod trav.mm: 13,15...13,25

Measurement

Speed 1/min : 500

1st pressure hPa : 240  
C-rod trav.mm : 11,3...11,7  
C-rod trav.mm : 10,7...10,9

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200  
Speed 1/min : 750  
Del.quantity cm3/ : 229,0...233,0  
1000H.: (226,0...236,0)  
Speed 1/min : 500  
Del.quantity cm3/ : -  
1000H.: -

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 5,7 V 17  
Edition : 19.12.86  
Superceeded : 1.84  
Calibrating oil : ISO-4113  
  
Combination no. : 9 407 083 267  
  
Injection pump  
Pump designation : PES6A90D410RS2596  
Governor  
Governor design. : RQV300...1400AB1145L

Customer-spec. information  
Customer : DAIMLER-BENZ

Engine : OM 352A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 40...45  
  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2.00...2.10  
                  : (1.95...2.15)  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.5 (0.75)

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 12.15...12.25  
-----  
Del.quantity cm<sup>3</sup>/ : 7.0...7.1  
-----  
100H.: (-)  
-----  
Dispersion cm<sup>3</sup>/ : 0.3  
-----  
100H.: (0.5)  
-----  
2nd speed 1/min: 300  
Contr.-rod trav. m: 9.4...9.6  
Del.quantity cm<sup>3</sup>/ : 1.2...1.6  
100H.: (-)  
Dispersion cm<sup>3</sup>/ : 0.25  
100H.: (0.45)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 400  
Sleeve travel mm: 1.60...1.80  
2nd speed 1/min: 800  
Sleeve travel mm: 4.35...4.50  
3rd speed 1/min: 1400  
Sleeve travel mm: 7.65...7.75

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 1500  
Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

Charge press. hPa : 1400  
Del.quantity cm<sup>3</sup>/ : 70.0...71.0  
1000H.: (68.0...73.0)  
Dispersion cm<sup>3</sup>/ : 3.0  
1000H.: (5.0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 61...69

## Testing:

1st c-rod trav.mm : 11.15  
Speed 1/min : 1440...1450  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1570...1600  
4th speed 1/min : 1750  
C-rod trav.mm : 0.00...1.00

## LOWEST RATED SPEED I

Control-lever

position degrees: 20...28

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 11.00  
Speed 1/min : 300  
C-rod trav.mm : 9.40...9.60  
C-rod trav.mm : 2.00  
Speed 1/min : 570...630

SWITCH-OVER POINT

Speed 1/min : 220(240)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 51.7...53.7  
1000H.: (49.2...56.2)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 5,7 N 13  
Edition : 19.09.86  
Superceeded : 01.86  
Calibrating oil : ISO-4113  
  
Combination no. : 9 407 083 270  
  
Injection pump  
Pump designation : PES6A90D410RS2293  
EP type number : 0 410 896 031  
Governor  
Governor design. : RQV300...1400AB740-1  
L  
Governor no. : 9 420 080 153  
  
Customer-spec. information  
Customer : DAIMLER-BENZ  
  
Engine : OM 352 A  
  
1st version kW : 118  
Speed 1/min: 2800

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 047  
  
Inlet press., bar : 1.0  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2,25...2,25  
: (2,10...2,30)

Contr.-rod trav.mm: 9,0...12,0  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5(0,75)

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 11,0...11,1  
-----  
Del.quantity cm<sup>3</sup>/ : 7,1...7,2  
-----  
100H.: (6,9...7,4)  
-----  
Dispersion cm<sup>3</sup>/ : 0,3  
-----  
100H.: (0,5)  
-----  
2nd speed 1/min: 300  
Contr.-rod trav. m: 7,4...7,6  
Del.quantity cm<sup>3</sup>/ : 1,0...1,6  
100H.: (0,9...1,7)  
Dispersion cm<sup>3</sup>/ : 0,25  
100H.: (0,45)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 300  
Sleeve travel mm: 0,7...1,2  
2nd speed 1/min: 550  
Sleeve travel mm: 2,7...3,0  
3rd speed 1/min: 775  
Sleeve travel mm: 4,1...4,6  
4th speed 1/min: 950  
Sleeve travel mm: 5,2...5,5  
5th speed 1/min: 1460  
Sleeve travel mm: 8,4...8,6

## SLEEVE POSITION

Control-lever position  
Degree: MAX.  
Speed 1/min: 1420  
Contr.-rod travelmm: 15,2...17,8

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm<sup>3</sup>/ : 71,0...72,0  
1000H.: (69,0...74,0)  
Dispersion cm<sup>3</sup>/ : 3,0  
1000H.: (5,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 54...62

Testing:

1st c-rod trav.mm : 10,0  
Speed 1/min : 1440...1450  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1565...1595  
4th speed 1/min : 1700  
C-rod trav.mm : 0...1,0

LOWEST RATED SPEED I

Control-lever  
position degrees: 10...18

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 9,0  
Speed 1/min : 300  
C-rod trav.mm : 7,4...7,6

CONSTANT REGULATION

Speed 1/min : 320...550

SWITCH-OVER POINT

Speed 1/min : 220 (240)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 53,0...56,0  
1000H.: (51,0...58,0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FOR 4,4 B  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 407 083 272  
Injection pump  
Pump designation : PES4A90D410RS2632  
Governor  
Governor design. : RS350/1400A2B2149L

Customer-spec. information  
Customer : FORD

Engine : FT0329

## TEST BENCH REQUIREMENTS

Overflow valve : 1 417 413 000

Inlet press., bar : 1.0

Calibrating nozzle-holder  
assembly : 0 681 443 009

Opening  
pressure, bar : 172

Test inj. tubing : 9 681 081 733

Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2.15...2.25  
                  : (2.10...2.30)  
Cam sequence : 1-3-4-2

SD ang. spacing<sup>o</sup>CS: 0-90-180-270  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

## BASIC SETTING

H16

1st speed 1/mi: 1400

Contr.-rod trav.mm: 10,1...10,2

Del.quantity cm3/ : 6,65...6,75

Dispersion cm3/ : 0,30

100H.: (0,45)

2nd speed 1/min: 350

Contr.-rod trav. m: 6,90...7,10

Del.quantity cm3/ : 0,85...1,25

## SLEEVE POSITION

Control-lever position

Degree: -

Speed 1/min: 800

Contr.-rod travelmm: 0,3-1,0

Governor-spring reload

Notch setting x : 5,75

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1400

Del.quantity cm3/ : 66,5...67,5

1000H.: (64,5...69,5)

Dispersion cm3/ : 3,00

1000H.: (4,50)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 58...64

Testing:

1st c-rod trav.mm : 9,10

Speed 1/min : 1440...1450

2nd c-rod trav.mm : 4,0

Speed 1/min : 1510...1540

4th speed 1/min : 1650

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 29...37

Setting point w/out aux. spring

Speed 1/min : 350

Contr.-rod trav.mm: 7,0

Speed 1/min : 300

C-rod trav.mm : 7,9...8,4

Speed 1/min : 400

## TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1400

C-rod trav.mm : 10,1...10,2

2nd speed 1/min : 1000  
C-rod trav.mm : 10,1...10,4  
3rd speed 1/min : 800  
C-rod trav.mm : 10,25...10,45  
4th speed 1/min : 500  
C-rod trav.mm : 10,4...10,5

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 1000  
Del.quantity cm3/ : 63,0...65,0  
1000H.: (60,5...67,5)  
Speed 1/min : 800  
Del.quantity cm3/ : 58,5...60,5  
1000H.: (56,0...63,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 53,0...55,0  
1000H.: (50,5...57,5)

Remarks:

## BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 5,7 U9  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 407 083 275  
Injection pump  
Pump designation : PES6A90D410RS2569-1  
Governor  
Governor design. : RQV300...1400AB1160L

Customer-spec. information  
Customer : MERCEDES-BENZ

Engine : OM 352

### TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_\_\_\_\_

### START OF DELIVERY

Prestroke mm : 2,0...2,1  
                  : (1,95...2,15)  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

## BASIC SETTING

1st speed 1/mi: 1400

Contr.-rod trav.mm: 11,5...11,6

Del.quantity cm3/ : 6,1...6,2

Dispersion cm3/ : 0,30

100H.: (0,45)

2nd speed 1/min: 300

Contr.-rod trav. m: 9,4...9,6

Del.quantity cm3/ : 1,0...1,4

Dispersion cm3/ : 0,25

100H.: (0,45)

(B) Setting of injection pump with  
externally-mounted governor

### SLEEVE TRAVELS

1st speed 1/min: 400

Sleeve travel mm: 1,60...1,80

2nd speed 1/min: 800

Sleeve travel mm: 4,35...4,50

3rd speed 1/min: 1400

Sleeve travel mm: 7,65...7,75

### SLEEVE POSITION

Control-lever position

Degree: MAX.

Speed 1/min: 1500

Cont.-rod travelmm: 15,2...17,8

### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1400

Del.quantity cm3/ : 61,0...62,0

1000H.: (59,0...64,0)

### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 59...67

Testing:

1st c-rod trav.mm : 10,5

Speed 1/min : 1445

2nd c-rod trav.mm : 4,0

Speed 1/min : 1560...1590

4th speed 1/min : 1750

C-rod trav.mm : 0...1,0

### LOWEST RATED SPEED I

Control-lever

position degrees: 24...32

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 11,0  
Speed 1/min : 300  
C-rod trav.mm : 9,4...9,6  
C-rod trav.mm : 2,0  
Speed 1/min : 570...630

#### TORQUE CONTROL

Dimension a mm : 0,5  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 11,50...11,60  
2nd speed 1/min : 1150  
C-rod trav.mm : 11,65...11,95  
3rd speed 1/min : 1050  
C-rod trav.mm : 11,90...12,10  
4th speed 1/min : 500  
C-rod trav.mm : 12,00...12,10

#### SWITCH-OVER POINT

Speed 1/min : 100...220

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 1050  
Del.quantity cm3/ : 61,5...63,5  
1000H.: (59,0...66,0)  
Speed 1/min : 500  
Del.quantity cm3/ : 47,3...49,3  
1000H.: (44,8...51,8)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MWM 3,9 B  
Edition : 18.09.86  
Superceeded : 11.85  
Calibrating oil : ISO-4113  
  
Combination no. : 9 407 083 285  
  
Injection pump  
Pump designation : PES4A80D32ORS1282  
EP type number : 9 400 083 056  
Governor  
Governor design. : RS350/1500A2B2073-1R  
Governor no. : 9 420 083 186

Customer-spec. information  
Customer : MWM

Engine : D229-4

## TEST BENCH REQUIREMENTS

Overflow valve : 1 417 413 012

Inlet press., bar : 1.0

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6,00X2,00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2,15...2,25  
: (2,10...2,30)  
Contr.-rod trav.mm: 9,0...12,0  
Cam sequence : 1-3-4-2

SD ang. spacing<sup>o</sup>CS: 0-90-180-270  
Tolerance + - : 0,5(0,75)

H2O

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9,0...12,0  
& c-rod tray max. : 21,0  
Difference<sup>o</sup> CS : 4...5

## BASIC SETTING

1st speed 1/mi: 1480

Contr.-rod trav.mm: 9,2...9,3

Del.quantity cm3/ : 5,7...5,8

100H.: (5,5...5,9)

Dispersion cm3/ : 0,25

100H.: (0,4)

2nd speed 1/min: 350

Contr.-rod trav. m: 5,9...6,1

Del.quantity cm3/ : 0,55...0,85

100H.: (0,4...1,0)

Dispersion cm3/ : 0,2

100H.: (0,35)

## SLEEVE POSITION

Speed 1/min: 800

Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

### 1st version

Speed 1/min: 1480

Del.quantity cm3/ : 56,5...57,5

1000H.: (55,0...59,0)

Dispersion cm3/ : 2,5

1000H.: (4,0)

## HIGHEST RATED SPEED

### 1st version

Control-lever

position degrees: 55...63

### Testing:

1st c-rod trav.mm : 8,2

Speed 1/min : 1540...1550

2nd c-rod trav.mm : 4,0

Speed 1/min : 1570...1600

4th speed 1/min : 1700

C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever

position degrees: 30...38

Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 6,0  
Speed 1/min : 350  
C-rod trav.mm : 6,6...7,2  
Speed 1/min : 1350  
C-rod trav.mm max : 2,6

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1480  
C-rod trav.mm : 9,2...9,3  
2nd speed 1/min : 500  
C-rod trav.mm : 10,7...10,8  
3rd speed 1/min : 800  
C-rod trav.mm : 10,3...10,6  
4th speed 1/min : 1000  
C-rod trav.mm : 10,0...10,2

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm3/ : 56,5...58,5  
1000H.: (54,5...60,5)  
Dispersion cm3/ : -  
1000H.: -  
Speed 1/min : 1000  
Del.quantity cm3/ : 59,5...61,5  
1000H.: (57,5...63,5)  
Dispersion cm3/ : -  
1000H.: -

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MWM 5,9 A5  
Edition : 7.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 9 407 083 297  
Injection pump  
Pump designation : PES6A80D32ORS1271  
Governor  
Governor design. : RSV350...1500A2B2122  
-1R

Customer-spec. information  
Customer : MWM

Engine : D 229-6

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6,00x1,50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 2,0...2,3  
: (2,15...2,35)  
Contr.-rod trav.mm: 10,5  
Cam sequence : 1-5-3-6-2-4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0,5 (0,75)

## BASIC SETTING

1st speed 1/mi: 1500  
-----  
Contr.-rod trav.mm: 9,2...9,3  
-----  
Del.quantity cm3/ : 5,2...5,3  
-----  
Dispersion cm3/ : 0,25  
-----  
100H.: (0,40)  
-----  
2nd speed 1/min: 350  
Contr.-rod trav. m: 6,4...6,6  
Del.quantity cm3/ : 0,75...1,05  
Dispersion cm3/ : 0,20  
100H.: (0,35)

## SLEEVE POSITION

Control-lever position  
Degree: LOSE  
Speed 1/min: 800  
Contr.-rod travelmm: 0,3...1,0

Governor-spring reload  
Notch setting x : 6,0

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1500  
Del.quantity cm3/ : 52,0...53,0  
1000H.: (51,0...54,0)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 62...64

Testing:  
1st c-rod trav.mm : 8,2  
Speed 1/min : 1530...1540  
2nd c-rod trav.mm : 4,0  
Speed 1/min : 1600...1630  
4th speed 1/min : 1780  
C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
position degrees: 24...26  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 5,9...6,1

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19,0

Speed 1/min : 350  
C-rod trav.mm : 6,4...6,6  
C-rod trav.mm : 2,0  
Speed 1/min : 620...680  
Speed 1/min : 800  
C-rod trav.mm max : 1,0

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1500  
C-rod trav.mm : 9,2...9,3  
2nd speed 1/min : 1000  
C-rod trav.mm : 9,75...10,05  
3rd speed 1/min : 800  
C-rod trav.mm : 9,95...10,15  
4th speed 1/min : 500  
C-rod trav.mm : 10,2...10,3

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 1000  
Del.quantity cm3/ : 52,5...54,5  
1000H.: (50,5...56,5)  
Speed 1/min : 800  
Del.quantity cm3/ : 50,5...52,5  
1000H.: (48,5...54,5)  
Speed 1/min : 500  
Del.quantity cm3/ : 46,5...48,5  
1000H.: (44,5...50,5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : SOA 3,7 A 1  
 Edition : 14.11.86  
 Superceeded : 4.85  
 Calibrating oil : ISO-4113

Combination no. : 0 400 463 104

Injection pump  
 Pump designation : PES3A80D410/3RS1183  
 EP type number : 0 410 483 011  
 Governor  
 Governor design. : RSV325...1075ABC492-  
 1L  
 Govenner no. : 0 420 232 478

Customer-spec. information  
 Customer : SONACOME

Engine : F3L912

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.85...2.05)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 2

SD ang. spacing<sup>0</sup>CS: 0-120-240  
 Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1075

Contr.-rod trav.mm: 11.00...11.10

Del.quantity cm<sup>3</sup>/ : 5.0...5.1

100H.: (4.8...5.2)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.3)

2nd speed 1/min: 325.0

Contr.-rod trav. m: 8.4...8.6

Del.quantity cm<sup>3</sup>/ : 1.0...1.6

100H.: (0.8...1.7)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.3)

## SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 5.50

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1075

Del.quantity cm<sup>3</sup>/ : 50.0...51.0

1000H.: (48.5...52.5)

Dispersion cm<sup>3</sup>/ : 2.00

1000H.: (3.50)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 50...58

Testing:

1st c-rod trav.mm : 10.00

Speed 1/min : 1115...1125

2nd c-rod trav.mm : 4.00

Speed 1/min : 1155...1185

3rd c-rod trav.mm : 4.00

Speed 1/min : 1165...1195

4th speed 1/min : 1335

C-rod trav.mm : 0.30...1.40

## LOWEST RATED SPEED I

Control-lever  
position degrees: 18...26  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 5.5

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 410...470

TORQUE CONTROL  
Dimension a mm : 1.00  
Torque-control curve - 1st version  
1st speed 1/min : 1075  
C-rod trav.mm : 11.00...11.10  
2nd speed 1/min : 500  
C-rod trav.inm : 12.00...12.10  
3rd speed 1/min : 935  
C-rod trav.mm : 11.40...11.60

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 22  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 463 151  
 Injection pump  
 Pump designation : PES3A80D410/3RS1324  
 EP type number : 0 410 483 017  
 Governor  
 Governor design. : RSV325...1075A8C494-2L  
 Govenner no. : 0 420 232 467

Customer-spec. information  
 Customer : KHD

Engine : F3L912

1st version kW : 30.0  
 Speed 1/min: 2150

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder assembly : 0 681 343 009

Opening pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values

**START OF DELIVERY**  
 Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.85...2.05)

H26

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 2

SD ang. spacing°CS: 0-120-240  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 1075

Contr.-rod trav.mm: 9.80...-9.90

Del.quantity cm3/ : 4.2...4.3

100H.: (4.0...4.4)

Dispersion cm3/ : 0.2

100H.: (0.3)

2nd speed 1/min: 325.0

Contr.-rod trav. m: 8.6...8.8

Del.quantity cm3/ : 0.8...1.4

100H.: (0.6...1.5)

Dispersion cm3/ : 0.2

100H.: (0.3)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 5.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1075  
 Del.quantity cm3/ : 42.0...43.0  
 1000H.: (40.5...44.5)  
 Dispersion cm3/ : 2.50  
 1000H.: (3.50)

**HIGHEST RATED SPEED**

1st version  
 Control-lever position degrees: 48...56

Testing:  
 1st c-rod trav.mm : 9.80  
 Speed 1/min : 1115...1125  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1140...1170  
 3rd c-rod trav.mm : 4.00

Speed 1/min : 1230...1260  
4th speed 1/min : 1390  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 17...25  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 8.2

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 8.10...8.30  
C-rod trav.mm : 2.00  
Speed 1/min : 660...720

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1075  
C-rod trav.mm : 9.80...9.90  
2nd speed 1/min : 500  
C-rod trav.mm : 10.60...10.70  
4th speed 1/min : 1025  
C-rod trav.mm : 9.90...10.10

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 900  
Del. quantity cm<sup>3</sup>/ : 43.0...45.0  
1000H.: (41.0...47.0)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 26  
 Edition : 28.11.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 463 152  
 Injection pump  
 Pump designation : PES3A80D410/3RS1350  
 EP type number : 0 410 483 023  
 Governor  
 Governor design. : RSV325...1175A8C2163  
 -3L  
 Govenner no. : 0 420 232 474

Customer-spec. information  
 Customer : KHD

Engine : F3L912  
 1st version kW : 34.0

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 581 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.85...2.05)  
 Contr.-rod trav.mm: 9.00...12.00

H28

Cam sequence : 1- 3- 2

SD ang. spacing<sup>o</sup>CS: 0-120-240  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 800

Contr.-rod trav.mm: 10.30...10.40

Del.quantity cm<sup>3</sup>/ : 4.9...5.0  
 100H.: (4.8...5.2)

Dispersion cm<sup>3</sup>/ : 0.2  
 100H.: (0.3)

2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 5.9...6.1  
 Del.quantity cm<sup>3</sup>/ : 1.0...1.6  
 100H.: (0.8...1.7)

Dispersion cm<sup>3</sup>/ : 0.2  
 100H.: (0.3)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 6.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 800  
 Del.quantity cm<sup>3</sup>/ : 49.5...50.5  
 1000H.: (48.0...52.0)  
 Dispersion cm<sup>3</sup>/ : 2.50  
 1000H.: (3.50)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 56...64

Testing:  
 1st c-rod trav.mm : 8.20  
 Speed 1/min : 1215...1225  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1245...1275  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1255...1285

4th speed 1/min : 1420  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 5.5

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 480...540

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1175  
C-rod trav.mm : 9.20...9.30  
2nd speed 1/min : 500  
C-rod trav.mm : 10.60...10.70  
4th speed 1/min : 970  
C-rod trav.mm : 9.90...10.10

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 1175  
Del.quantity cm3/ : 47.5...51.5  
1000H.: (45.5...53.5)  
Speed 1/min : 500  
Del.quantity cm3/ : 48.5...49.5  
1000H.: (46.5...51.5)  
Dispersion cm3/ : 2.00

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 27  
 Edition : 30.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 463 153  
 Injection pump  
 Pump designation : PES3A80D410/3RS1350  
 EP type number : 0 410 483 023  
 Governor  
 Governor design. : RSV325...1250A2C2168  
 -3L  
 Govenner no. : 0 420 232 475

Customer-spec. information  
 Customer : KHD

Engine : F3L912

1st version kW : 40.0  
 Speed 1/min: 2500

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.85...2.05)

J02

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 2

SD ang. spacing<sup>o</sup>CS: 0-120-240  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 1250

Contr.-rod trav.mm: 10.10...10.20

Del.quantity cm3/ : 5.7...5.8

100H.: (5.6...6.0)

Dispersion cm3/ : 0.2

100H.: (0.3)

2nd speed 1/min: 325.0

Contr.-rod trav. m: 6.8...7.0

Del.quantity cm3/ : 1.0...1.6

100H.: (0.8...1.7)

Dispersion cm3/ : 0.2

100H.: (0.3)

**SLEEVE POSITION**

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 3.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1250

Del.quantity cm3/ : 57.5...58.5

1000H.: (56.0...60.0)

Dispersion cm3/ : 2.50

1000H.: (3.50)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 42...50

Testing:

1st c-rod trav.mm : 9.10

Speed 1/min : 1290...1300

2nd c-rod trav.mm : 4.00

Speed 1/min : 1315...1345

3rd c-rod trav.mm : 4.00

Speed 1/min : 1335...1365  
4th speed 1/min : 1500  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 13...21  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 5.5

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 465...525

#### TORQUE CONTROL

Dimension a mm : 0.80  
Torque-control curve - 1st version  
1st speed 1/min : 1250  
C-rod trav.mm : 10.10...-10.20  
2nd speed 1/min : 500  
C-rod trav.mm : 10.90...11.00  
4th speed 1/min : 1025  
C-rod trav.mm : 10.50...10.70

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del. quantity cm3/ : 54.0...56.0  
1000H.: (52.0...58.0)  
Dispersion cm3/ : 2.00

Remarks:

: TKS2.50

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 1 G 29  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 463 154  
Injection pump  
Pump designation : PES3A80D410/3RS1350  
EP type number : 0 410 483 023  
Governor  
Governor design. : RSV325...1175A8C2223  
                  -L  
Governor no. : 0 420 232 482  
Customer-spec. information  
Customer : KHD  
Engine : F3L912  
1st version kW : 33.0  
Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 1.90...2.00  
                  : (1.85...2.05)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 2

SD ang. spacing<sup>o</sup>CS: 0-120-240  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 750  
-----  
Contr.-rod trav.mm: 10.20...10.30  
-----  
Del.quantity cm3/ : 4.8...4.9  
-----  
100H.: (4.6...5.0)  
-----  
Dispersion cm3/ : 0.2  
-----  
100H.: (0.3)  
-----  
2nd speed 1/min: 325.0  
Contr.-rod trav. m: 6.2...6.4  
Del.quantity cm3/ : 1.0...1.6  
100H.: (0.8...1.7)  
Dispersion cm3/ : 0.2  
100H.: (0.3)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : ?

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 750  
Del.quantity cm3/ : 48.0...49.0  
1000H.: (46.5...50.5)  
Dispersion cm3/ : 2.50  
1000H.: (3.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 54...62

## Testing:

1st c-rod trav.mm : 8.10  
Speed 1/min : 1215...1225  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1240...1270  
3rd c-rod trav.mm : 4.00

Speed 1/min : 1245...1275  
4th speed 1/min : 1420  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 19...27  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 5.8

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 6.20...6.40  
C-rod trav.mm : 2.00  
Speed 1/min : 460...520

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1175  
C-rod trav.mm : 9.00...9.30  
2nd speed 1/min : 500  
C-rod trav.mm : 10.30...10.40  
4th speed 1/min : 920  
C-rod trav.mm : 9.90...10.30

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 1175  
Del.quantity cm3/ : 46.0...51.0  
1000H.: (44.0...53.0)  
Speed 1/min : 500  
Del.quantity cm3/ : 45.5...48.5  
1000H.: (43.5...50.5)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : S0A 3,7 A  
 Edition : 14.11.86  
 Superceeded : 4.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 464 095  
 Injection pump  
 Pump designation : PES4A80D410/3RS1183  
 EP type number : 0 410 484 013  
 Governor  
 Governor design. : RSV325...1150A8C493-1L  
 Govenner no. : 0 420 232 479

Customer-spec. information  
 Customer : SONACOME

Engine : F4L912

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.00  
 Calibrating nozzle-holder assembly : 0 681 343 009  
 Opening pressure, bar : 172...175  
 Test inj. tubing : 1 680 750 014  
 Outside diameter x Wall thickness x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 1.90...2.00  
 : (1.85...2.05)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 4- 2

SD ang. spacing°CS: 0-90-180-270  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1150  
 -----  
 Contr.-rod trav.mm: 10.60...10.70  
 -----  
 Del.quantity cm3/ : 5.0...5.1  
 -----  
 100H.: (4.8...5.2)  
 -----  
 Dispersion cm3/ : 0.2  
 -----  
 100H.: (0.3)  
 -----  
 2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 9.3...9.5  
 Del.quantity cm3/ : 1.6...2.2  
 100H.: (1.5...2.4)  
 Dispersion cm3/ : 0.2  
 100H.: (0.3)

**SLEEVE POSITION**

Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 3.50

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1150  
 Del.quantity cm3/ : 50.0...51.0  
 1000H.: (48.5...52.5)  
 Dispersion cm3/ : 2.00  
 1000H.: (3.50)

**HIGHEST RATED SPEED**

1st version  
 Control-lever position degrees: 47...55

**Testing:**

1st c-rod trav.mm : 9.60  
 Speed 1/min : 1190...1200  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1220...1250  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1245...1275  
 4th speed 1/min : 1350  
 C-rod trav.mm : 0.30...1.40

**LOWEST RATED SPEED I**

Control-lever position degrees: 13...21

Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 8.9

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 9.30...9.50  
C-rod trav.mm : 2.00  
Speed 1/min : 480...540

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1150  
C-rod trav.mm : 10.60...10.70  
2nd speed 1/min : 450  
C-rod trav.mm : 11.60...11.70  
3rd speed 1/min : 900  
C-rod trav.mm : 11.00...11.30

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : SOA 3,7 A 1  
Edition : 17.12.86  
Superceeded : 4.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 464 104  
  
Injection pump  
Pump designation : PES4A75D410/3RS1183  
EP type number : 0 410 474 978  
Governor  
Governor design. : RSV325...1400A8C742-  
1L  
Governor no. : 0 420 232 480

Customer-spec. information  
Customer : SONACOME /ALGER.

Engine : F4L912

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
: (1.85...2.05)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 4- 2

SD ang. spacing°CS: 0-90-180-270  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 11.00...11.10  
-----  
Del.quantity cm3/ : 5.5...5.6  
-----  
100H.: (5.3...5.7)  
-----  
Dispersion cm3/ : 0.2  
-----  
100H.: (0.3)  
-----  
2nd speed 1/min: 325.0  
Contr.-rod trav. m: 7.9...8.1  
Del.quantity cm3/ : 0.7...1.3  
100H.: (0.5...1.4)  
Dispersion cm3/ : 0.2  
100H.: (0.3)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 5.75

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm3/ : 55.0...56.0  
1000H.: (53.5...57.5)  
Dispersion cm3/ : 2.00  
1000H.: (3.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 65...73

## Testing:

1st c-rod trav.mm : 10.00  
Speed 1/min : 1440...1450  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1485...1515  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1525...1555  
4th speed 1/min : 1700  
C-rod trav.mm : 0.30...1.40

## LOWEST RATED SPEED I

Control-lever  
position degrees: 18...26  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 7.5

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 7.90...8.10  
C-rod trav.mm : 2.00  
Speed 1/min : 640...700

TORQUE CONTROL  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 11.00...11.10  
2nd speed 1/min : 500  
C-rod trav.mm : 12.00...12.10  
3rd speed 1/min : 885  
C-rod trav.mm : 11.40...11.60

FUEL-DELIVERY CHARACTERISTICS  
Speed 1/min : 800  
Del.quantity cm3/ : 50.0...52.0  
1000H.: (48.5...53.5)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 5,7 E  
 Edition : 14.11.86  
 Superceeded : 10.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 466 045  
 Injection pump  
 Pump designation : PES6A75D410/3RS1197  
 EP type number : 0 410 476 986  
 Governor  
 Governor design. : RSV325...1150A8C494-1L  
 Govenner no. : 0 420 232 481  
 Customer-spec. information  
 Customer : SONACOME  
 Engine : F6L912

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.50  
 Calibrating nozzle-holder assembly : 0 681 343 009  
 Opening pressure, bar : 172...175  
 Test inj. tubing : 1 680 750 014  
 Outside diameter x Wall thickness x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 1.90...2.00  
 : (1.85...2.05)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1130  
 -----  
 Contr.-rod trav.mm: 10.50...10.60  
 -----  
 Del.quantity cm3/ : 4.3...4.4  
 -----  
 100H.: (4.2...4.6)  
 -----  
 Dispersion cm3/ : 0.2  
 -----  
 100H.: (0.3)  
 -----  
 2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 8.4...8.6  
 Del.quantity cm3/ : 0.8...1.4  
 100H.: (0.6...1.5)  
 Dispersion cm3/ : 0.2  
 100H.: (0.3)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : ?

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1130  
 Del.quantity cm3/ : 43.5...44.5  
 1000H.: (42.0...46.0)  
 Dispersion cm3/ : 2.00  
 1000H.: (3.50)

**HIGHEST RATED SPEED**

1st version  
 Control-lever position degrees: 47...55  
 Testing:  
 1st c-rod trav.mm : 9.50  
 Speed 1/min : 1170...1180  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1195...1225  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1220...1250  
 4th speed 1/min : 1385  
 C-rod trav.mm : 0.30...1.40

**LOWEST RATED SPEED I**

Control-lever  
position degrees: 14...22  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 8.0

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 8.40...8.60  
C-rod trav.mm : 2.00  
Speed 1/min : 455...515

TORQUE CONTROL  
Torque-control curve - 1st version  
1st speed 1/min : 1130  
C-rod trav.mm : 10.50...10.60  
2nd speed 1/min : 500  
C-rod trav.mm : 11.50...11.60  
3rd speed 1/min : 930  
C-rod trav.mm : 10.90...11.10

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : COU 2,0 A  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 472 033  
Injection pump  
Pump designation : PES2A70D310RS1233  
EP type number : 0 410 472 009  
Governor  
Governor design. : RSV200...1250A1B527L  
Governor no. : 0 420 232 145

Customer-spec. information  
Customer : COUACHE

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Irsp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 1.90...2.00  
                  : (1.85...2.05)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 2

SD ang. spacing<sup>0</sup>CS: 0-90  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1000  
Contr.-rod trav.mm: 9.40...9.50  
Del.quantity cm<sup>3</sup>/ : 3.9...4.0  
100H.: (3.8...4.1)  
Dispersion cm<sup>3</sup>/ : 0.2  
100H.: (0.3)  
2nd speed 1/min: 200.0  
Contr.-rod trav. m: 6.4...6.6  
Del.quantity cm<sup>3</sup>/ : 0.8...1.4  
100H.: (0.6...1.5)  
Dispersion cm<sup>3</sup>/ : 0.2  
100H.: (0.3)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Contr.-rod travelmm: 0.30...1.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1000  
Del.quantity cm<sup>3</sup>/ : 39.0...40.0  
1000H.: (38.0...41.0)  
Dispersion cm<sup>3</sup>/ : 2.00  
1000H.: (3.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: ?

## Testing:

1st c-rod trav.mm : 8.40  
Speed 1/min : 1310...1320  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1330...1360  
3rd c-rod trav.mm : 4.00  
4th speed 1/min : 1480  
C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever  
position degrees: ?  
Setting point w/out aux. spring  
Speed 1/min : 200  
Contr.-rod trav.mm: 6.0

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 200  
C-rod trav.mm : 6.40...6.60

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1000  
C-rod trav.mm : 9.40...9.50  
2nd speed 1/min : 500  
C-rod trav.mm : 9.40...9.60

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : STE 3,1 B  
Edition : 12.09.86  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
Combination no. : 0 400 474 152  
Injection pump  
Pump designation : PES4A75D410RS1215  
EP type number : 0 410 474 969  
Governor  
Governor design. : RSV250...900A7B719DL  
Governor no. : 0 420 234 327

Customer-spec. information  
Customer : STEYR

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.45...2.55  
: (2.40...2.60)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 4- 2

SD ang. spacing<sup>0</sup>CS: 0-90-180-270  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 900  
-----  
Contr.-rod trav.mm: 11.50...11.60  
-----  
Del.quantity cm3/ : 5.8...5.9  
-----  
100H.: (5.7...6.1)  
-----  
Dispersion cm3/ : 0.2  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 250.0  
Contr.-rod trav. m: 5.4...5.6  
Del.quantity cm3/ : 1.0...1.6  
-----  
100H.: (0.8...1.7)  
Dispersion cm3/ : 0.2  
-----  
100H.: (0.3)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
Notch setting x : ?

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 900  
Del.quantity cm3/ : 58.5...59.5  
-----  
1000H.: (57.0...61.0)  
Dispersion cm3/ : 2.50  
-----  
1000H.: (4.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 56...64

Testing:  
1st c-rod trav.mm : 10.50  
Speed 1/min : 930...940  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 965...995  
4th speed 1/min : 1100  
C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29  
Setting point w/out aux. spring  
Speed 1/min : 250

Contr.-rod trav.mm: 5.5

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 250  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 405...465

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 900  
C-rod trav.mm : 11.50...11.60  
2nd speed 1/min : 500  
C-rod trav.mm : 11.70...11.90  
3rd speed 1/min : 750  
C-rod trav.mm : 11.70...11.90

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 19,0 N2  
Edition : 12.09.86  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 640 107  
  
Injection pump  
Pump designation : PE12A95D610LS2590  
EP type number : 0 410 690 995  
Governor  
Governor design. : RQV300...1150AB1047D  
L  
Governor no. : 0 420 214 242  
  
Customer-spec. information  
Customer : KHD  
  
Engine : F12L413FW  
  
1st version kW : 230.0  
Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.00  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 1.50...1.60  
: (1.45...1.65)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 4- 9- 8- 5- 2-  
11- 10- 3- 6- 7- 12

SD ang. spacing°CS: 0-15-60-75-120-135-  
180-195-240-255-300-  
315  
Tolerance + - ° : 0.50 (0.75)  
SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1150  
-----  
Contr.-rod trav.mm: 9.30...9.40  
-----  
Del.quantity cm3/ : 6.9...7.1  
-----  
100H.: (6.7...7.3)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 300.0  
Contr.-rod trav. m: 7.2...7.4  
Del.quantity cm3/ : 1.4...2.0  
100H.: (1.1...2.2)  
Dispersion cm3/ : 0.7  
100H.: (-)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 300  
Sleeve travel mm: 1.20...1.30  
2nd speed 1/min: 400  
Sleeve travel mm: 2.20...2.60  
3rd speed 1/min: 600  
Sleeve travel mm: 3.00...3.50  
4th speed 1/min: 1195  
Sleeve travel mm: 8.40...8.50  
5th speed 1/min: 1245  
Sleeve travel mm: 9.10...9.30

## SLEEVE POSITION

Control-lever position  
Degree: -1  
Speed 1/min: 1200  
Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1150

Del. quantity cm<sup>3</sup>/ : 69.0...71.0  
1000H.: (67.0...73.0)  
Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 61...69

#### Testing:

1st c-rod trav.mm : 8.30  
Speed 1/min : 1190...1200  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1230...1260  
4th speed 1/min : 1350  
C-rod trav.mm : 0...1.0

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 8...16

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 7.80  
Speed 1/min : 300  
C-rod trav.mm : 6.20...6.40

#### CONSTANT REGULATION

Speed 1/min : 320...430

#### TORQUE CONTROL

Dimension a mm : 1.00  
Torque-control curve - 1st version  
1st speed 1/min : 1150  
C-rod trav.mm : 9.30...9.40  
2nd speed 1/min : 500  
C-rod trav.mm : 10.30...10.40  
3rd speed 1/min : 935  
C-rod trav.mm : 10.00...10.20  
4th speed 1/min : 1045  
C-rod trav.mm : 9.50...9.70

#### SWITCH-OVER POINT

Speed 1/min : 220 (240)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del. quantity cm<sup>3</sup>/ : 77.5...80.5  
1000H.: (75.0...83.0)  
Speed 1/min : 800  
Del. quantity cm<sup>3</sup>/ : 98.5...101.5  
1000H.: (96.0...104.0)

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

11- 10- 3- 6- 7- 12

Note inst. in remarks column

Test sheet : KHD 19,0 N3  
 Edition : 12.09.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 640 112  
 Injection pump  
 Pump designation : PE12A95D610LS2590  
 EP type number : 0 410 690 995  
 Governor  
 Governor design. : RQV300...1150AB1086L  
 Govenor no. : 0 420 212 113

Customer-spec. information  
 Customer : KHD

Engine : F12L413F  
 1st version kW : 235.0

TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

START OF DELIVERY

Test pressure, bar: 25...27  
 Prestroke mm : 1.50...1.60  
 : (1.45...1.65)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 4- 9- 8- 5- 2-

SD ang. spacing<sup>o</sup>CS: 0-15-60-75-120-135-  
 180-195-240-255-300-  
 315  
 Tolerance + - ° : 0.50 (0.75)  
 SD mark cyl. no. : 1

BASIC SETTING

1st speed 1/mi: 1150  
 -----  
 Contr.-rod trav.mm: 9.50...9.60  
 -----  
 Del.quantity cm<sup>3</sup>/ : 7.9...8.1  
 -----  
 100H.: (7.7...8.3)  
 -----  
 Dispersion cm<sup>3</sup>/ : 0.3  
 -----  
 100H.: (0.6)  
 -----  
 2nd speed 1/min: 300.0  
 Contr.-rod trav. m: 6.4...6.6  
 Del.quantity cm<sup>3</sup>/ : 1.0...1.6  
 100H.: (0.7...1.8)  
 Dispersion cm<sup>3</sup>/ : 0.3  
 100H.: (0.5)

(B) Setting of injection pump with  
 externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 250  
 Sleeve travel mm: 0.30...0.50  
 2nd speed 1/min: 600  
 Sleeve travel mm: 2.70...3.00  
 3rd speed 1/min: 1000  
 Sleeve travel mm: 5.90...6.10  
 4th speed 1/min: 1190  
 Sleeve travel mm: 8.30...8.50

SLEEVE POSITION

Control-lever position  
 Degree: -1  
 Speed 1/min: 1200  
 Cont.-rod travelmm: 15.20...17.80

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1150  
 Del.quantity cm<sup>3</sup>/ : 79.0...81.0  
 1000H.: (77.0...83.0)  
 Dispersion cm<sup>3</sup>/ : 3.50  
 1000H.: (6.00)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 56...64

Testing:

1st c-rod trav.mm : 8.50

Speed 1/min : 1190...1200

2nd c-rod trav.mm : 4.00

Speed 1/min : 1230...1260

4th speed 1/min : 1350

C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I

Control-lever

position degrees: 18...26

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 6.5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 8.00

Speed 1/min : 300

C-rod trav.mm : 6.40...6.60

CONSTANT REGULATION

Speed 1/min : 420...540

TORQUE CONTROL

Dimension a mm : 0.90

Torque-control curve - 1st version

1st speed 1/min : 1150

C-rod trav.mm : 9.50...9.60

2nd speed 1/min : 500

C-rod trav.mm : 10.40...10.50

3rd speed 1/min : 990

C-rod trav.mm : 10.10...10.30

4th speed 1/min : 1060

C-rod trav.mm : 9.60...9.90

SWITCH-OVER POINT

Speed 1/min : 220 (240)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del. quantity cm<sup>3</sup>/ : 84.5...87.5

1000H.: (82.0...90.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 12,7 P4  
 Edition : 30.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 648 145  
 Injection pump  
 Pump designation : PE8A95D410LS2608  
 EP type number : 0 410 698 988  
 Governor  
 Governor design. : RQ300/1100AB1230L  
 Govenner no. : 0 420 200 108

Customer-spec. information  
 Customer : KHD

Engine : F8L413F

1st version kW : 162.0  
 Speed 1/min: 2200

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.00...2.10  
 : (1.95...2.15)

Contr.-rod trav.mm: 9.00...12.00

J20

Cam sequence : 1- 8- 7- 2- 6- 5-  
 4- 3

SD ang. spacing°CS: 0-45-90-135-180-225-  
 270-315

Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10.10...10.20

Del.quantity cm3/ : 9.0...9.2

100H.: (8.8...9.4)

Dispersion cm3/ : 0.3

100H.: (0.6)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 6.4...6.6

Del.quantity cm3/ : 1.0...1.6

100H.: (0.7...1.8)

Dispersion cm3/ : 0.5

100H.: (0.7)

## SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 550

Cont.-rod travelmm: 15.60...16.40

Governor-spring reload

Notch setting x : ?

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 90.0...92.0

1000H.: (88.0...94.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: ?

Testing:

1st c-rod trav.mm : 9.10

Speed 1/min : 1145...1160

2nd c-rod trav.mm : 4.00

Speed 1/min : 1205...1235

LOWEST RATED SPEED I

Control-lever

position degrees: ?

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 6.5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 8.00

Speed 1/min : 300

C-rod trav.mm : 6.40...6.60

C-rod trav.mm : 2.00

Speed 1/min : 355...395

TORQUE CONTROL

Dimension a <sub>mm</sub> : 0.35

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 10.10...10.20

2nd speed 1/min : 550

C-rod trav.mm : 10.80...10.90

3rd speed 1/min : 810

C-rod trav.mm : 10.60...10.80

4th speed 1/min : 980

C-rod trav.mm : 10.30...10.50

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700

Del.quantity cm<sup>3</sup>/ : 92.5...95.5

1000H.: (90.0...98.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 15,8 N1  
Edition : 09.03.87  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
Combination no. : 0 400 649 219  
Injection pump  
Pump designation : PE10A95D610/4LS2589  
EP type number : 0 410 699 994  
Governor  
Governor design. : RQV300...1150AB1047D  
Governor no. : 0 420 214 242  
Customer-spec. information  
Customer : KHD  
Engine : F10L '13  
1st version kW : 192.0  
Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 1.50...1.60  
: (1.45...1.65)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1-10- 9- 4- 3- 6-  
5- 8- 7- 2

SD ang. spacing°CS: 0-27-72-99-144-171-  
216-243-288-315  
Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1150  
-----  
Contr.-rod trav.mm: 8.30...8.40  
-----  
Del.quantity cm3/ : 6.9...7.1  
-----  
100H.: (6.7...7.3)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 300.0  
Contr.-rod trav. m: 6.2...6.4  
Del.quantity cm3/ : 1.4...2.0  
100H.: (1.1...2.2)  
Dispersion cm3/ : 0.3  
100H.: (0.5)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 300  
Sleeve travel mm: 1.20...1.30  
2nd speed 1/min: 400  
Sleeve travel mm: 2.30...2.70  
3rd speed 1/min: 600  
Sleeve travel mm: 3.00...3.50  
4th speed 1/min: 1195  
Sleeve travel mm: 8.40...8.50  
5th speed 1/min: 1235  
Sleeve travel mm: 8.90...9.10

## SLEEVE POSITION

Control-lever position  
Degree: -1  
Speed 1/min: 1190  
Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1150  
Del.quantity cm3/ : 69.0...71.0  
1000H.: (67.0...73.0)

Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 62...70

#### Testing:

1st c-rod trav.mm : 7.30  
Speed 1/min : 1190...1200  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1220...1250  
4th speed 1/min : 1350  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever

position degrees: 11...19

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 7.80  
Speed 1/min : 300  
C-rod trav.mm : 6.20...6.40

#### CONSTANT REGULATION

Speed 1/min : 320...430

#### TORQUE CONTROL

Dimension a mm : 1.00  
Torque-control curve - 1st version  
1st speed 1/min : 1150  
C-rod trav.mm : 8.30...8.40  
2nd speed 1/min : 500  
C-rod trav.mm : 9.30...9.40  
3rd speed 1/min : 935  
C-rod trav.mm : 9.00...9.20  
4th speed 1/min : 1045  
C-rod trav.mm : 8.50...8.70

#### SWITCH-OVER POINT

Speed 1/min : 220 (240)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm<sup>3</sup>/ : 75.5...78.5  
1000H.: (73.0...81.0)  
Speed 1/min : 800  
Del.quantity cm<sup>3</sup>/ : 98.5...101.5  
1000H.: (96.0...104.0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MAN 16\_OC10  
Edition : 12.09.86  
Superceeded : 4.85  
Calibrating oil : ISO-4113  
Combination no. : 0 400 649 235  
Injection pump  
Pump designation : PE10A95D520/SLS2501  
EP type number : 0 410 699 997  
Governor  
Governor design. : RQV250...1250AB1180R  
Governor no. : 0 420 213 095

Customer-spec. information  
Customer : MAN

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 003

Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1.70...1.80  
                  : (1.65...1.85)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 10- 9- 4- 1- 8- 7  
Cam sequence : - 6- 3- 5- 2

SD ang. spacing°CS: 0-45-72-117-144-189-  
216-261-288-333  
Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 10

## BASIC SETTING

1st speed 1/mi: 1250  
-----  
Contr.-rod trav.mm: 11.30...11.40  
-----  
Del.quantity cm3/ : 12.3...12.5  
-----  
100H.: (12.1...12.7)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 250.0  
Contr.-rod trav. m: 5.9...6.1  
Del.quantity cm3/ : 1.5...2.1  
100H.: (1.2...2.3)  
Dispersion cm3/ : 0.3  
100H.: (0.5)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 200  
Sleeve travel mm: 0.70...0.90  
2nd speed 1/min: 425  
Sleeve travel mm: 2.80...3.10  
3rd speed 1/min: 1000  
Sleeve travel mm: 5.60...5.80  
4th speed 1/min: 1290  
Sleeve travel mm: 8.10...8.20

## SLEEVE POSITION

Control-lever position  
Degree: -1  
Speed 1/min: 1325  
Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1250  
Charge press. hPa : 700  
Del.quantity cm3/ : 123.0...125.0  
1000H.: (121.0...127.0)  
Dispersion cm3/ : 3.50  
1000H.: (6.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 42...50

Testing:  
1st c-rod trav.mm : 10.30  
Speed 1/min : 1290...1300  
2nd c-rod trav.mm : 4.50  
Speed 1/min : 1355...1385  
4th speed 1/min : 1500  
C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I  
Control-lever  
position degrees: 10...18

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 7.50  
Speed 1/min : 250  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 320...380  
Speed 1/min : 500  
C-rod trav.mm max : 1.00

TORQUE CONTROL  
Torque-control curve - 1st version  
1st speed 1/min : 1250  
C-rod trav.mm : 11.30...11.40  
2nd speed 1/min : 500  
C-rod trav.mm : 11.30...11.50

compensator (LDA,ADA,ALDA)

1st version  
Setting  
Speed 1/min : 500  
Pressure hPa : 700  
Contr.-rod trav.mm: 11.30...11.40

Measurement  
Speed 1/min : 500

1st pressure hPa : -  
C-rod trav.mm : 9.20...9.30  
2nd pressure hPa : 387  
C-rod trav.mm : 10.60...10.90  
3rd pressure hPa : 280  
C-rod trav.mm : 9.50...9.70

SWITCH-OVER POINT  
Speed 1/min : 170 (190)

#### FUEL-DELIVERY CHARACTERISTICS

1st version  
Charge press. hPa : 700  
Speed 1/min : 750  
Del.quantity cm3/ : 119.5...122.5  
1000H.: (117.5...124.5)  
Charge press. hPa : -

Speed 1/min : 500  
Del.quantity cm3/ : 76.5...79.5  
1000H.: (74.5...81.5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DAF 8,3 I 1  
Edition : 09.03.87  
Superceeded : 1.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 676 151  
  
Injection pump  
Pump designation : PE6A90D410RS2524  
EP type number : 0 410 696 179  
Governor  
Governor design. : RSV250...1200ASB2012  
L  
Governor no. : 0 420 234 379  
  
Customer-spec. information  
Customer : DAF  
  
Engine : DH825  
Speed 1/min: 2400

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.50  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 015  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600  
  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.30...2.40  
: (2.25...2.35)  
Contr.-rod trav.mm: 7.50...10.50  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

#### START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 8.50...9.50  
Difference<sup>o</sup> CS : 4.50...5.50

#### BASIC SETTING

1st speed 1/mi: 1000

Contr.-rod trav.mm: 9.40...9.50

Del.quantity cm<sup>3</sup>/ : 7.1...7.2

100H.: (6.9...7.4)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.4)

2nd speed 1/min: 250.0

Contr.-rod trav. m: 6.5...6.7

Del.quantity cm<sup>3</sup>/ : 0.9...1.5  
100H.: (0.7...1.7)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.4)

#### SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Contr.-rod travelmm: 0.30...1.00

Governor-spring reload

Notch setting x : ?

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1000

Del.quantity cm<sup>3</sup>/ : 71.0...72.0  
1000H.: (69.0...74.0)

Dispersion cm<sup>3</sup>/ : 3.00

1000H.: (4.50)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 45...53

Testing:

1st c-rod trav.mm : 8.40

Speed 1/min : 1240...1250

2nd c-rod trav.mm : 4.00  
Speed 1/min : 1260...1290  
4th speed 1/min : 1480  
C-rod trav.mm : 0.30...1.70

#### LOWEST RATED SPEED I

Control-lever

position degrees: 12...20

Setting point w/out aux. spring

Speed 1/min : 250

Contr.-rod trav.mm: 5.5

Speed 1/min : 250

C-rod trav.mm : 5.90...6.10

C-rod trav.mm : 2.00

Speed 1/min : 580...640

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1000

C-rod trav.mm : 9.40...9.50

2nd speed 1/min : 400

C-rod trav.mm : 9.40...9.60

3rd speed 1/min : 300

C-rod trav.mm : 9.70...10.20

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DAF 6,2 K 1  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 676 154  
  
Injection pump  
Pump designation : PE6A85D32ORS2546  
EP type number : 0 410 686 943  
Governor  
Governor design. : RSV250...1300A1B2025  
R  
Governor no. : 0 420 233 129  
  
Customer-spec. information  
Customer : DAF  
  
Engine : DF615

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.50  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 015  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.15...2.25  
                  : (2.10...2.30)  
Contr.-rod trav.mm: 7.50...10.50  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 8.50...9.50  
Difference<sup>o</sup> CS : 3.00...4.00

## BASIC SETTING

1st speed 1/mi: 1000  
-----  
Contr.-rod trav.mm: 10.40...10.50  
-----  
Del.quantity cm3/ : 5.6...5.7  
-----  
100H.: (5.4...5.9)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 250.0  
Contr.-rod trav. m: 8.1...8.3  
Del.quantity cm3/ : 1.4...1.9  
100H.: (1.2...2.1)  
Dispersion cm3/ : 0.2  
100H.: (0.4)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
Notch setting x : 4.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1000  
Del.quantity cm3/ : 56.0...57.0  
1000H.: (54.0...59.0)  
Dispersion cm3/ : 3.00  
1000H.: (4.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 63...71

Testing:  
1st c-rod trav.mm : 9.40  
Speed 1/min : 1340...1350  
2nd c-rod trav.mm : 4.00

Speed 1/min : 1355...1385  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1380...1410  
4th speed 1/min : 1540  
C-rod trav.mm : 0.30...1.70

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 17...25  
Setting point w/out aux. spring  
Speed 1/min : 250  
Contr.-rod trav.mm: 5.5

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 250  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 470...530

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1000  
C-rod trav.mm : 10.40...10.50  
2nd speed 1/min : 400  
C-rod trav.mm : 10.40...10.60  
3rd speed 1/min : 300  
C-rod trav.mm : 10.70...11.20

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DAF 8,3 N 2  
 Edition : 09.03.87  
 Superceeded : 10.84  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 676 172  
 Injection pump  
 Pump designation : PE6A95D41ORS2575Y  
 EP type number : 0 410 696 981  
 Governor  
 Governor design. : RSV250...750A7B2124L  
 Governor no. : 0 420 232 257

Customer-spec. information  
 Customer : DAF

Engine : DHTD 825  
 Speed 1/min: 1500

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.00...2.10  
 : (1.95...2.15)  
 Contr.-rod trav.mm: 7.50...10.50  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 8.50...9.50  
 Difference<sup>o</sup> CS : 3.00...4.00

## BASIC SETTING

1st speed 1/mi: 750  
 -----  
 Contr.-rod trav.mm: 13.20...13.30  
 -----  
 Del.quantity cm3/ : 11.0...11.2  
 -----  
 100H.: (10.8...11.4)  
 -----  
 Dispersion cm3/ : 0.4  
 -----  
 100H.: (0.6)  
 -----

2nd speed 1/min: 250.0  
 Contr.-rod trav. m: 6.0...6.2  
 Del.quantity cm3/ : 0.7...1.3  
 100H.: (-)  
 Dispersion cm3/ : 0.2  
 100H.: (-)

## SLEEVE POSITION

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
 Notch setting x : ?

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 750  
 Del.quantity cm3/ : 110.5...112.5  
 100OH.: (108.5...114.5)  
 Dispersion cm3/ : 4.00  
 100OH.: (6.00)

## HIGHEST RATED SPEED

1st version  
 Control-lever  
 position degrees: 36...44

Testing:  
 1st c-rod trav.mm : 12.20  
 Speed 1/min : 770...780  
 2nd c-rod trav.mm : 4.00

Speed 1/min : 785...805  
4th speed 1/min : 955  
C-rod trav.mm : 0.39...1.70

LOWEST RATED SPEED I

Control-lever

position degrees: 12...20

Setting point w/out aux. spring

Speed 1/min : 250

Contr.-rod trav.mm: 6.1

Speed 1/min : 250

C-rod trav.mm : 6.00...6.20

C-rod trav.mm : 2.00

Speed 1/min : 260...320

SET IDLE AUXILIARY SPRING

Contr.-rod trav.mm: 2.00

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DAF 6,2 N 3  
Edition : 09.03.87  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
Combination no. : 0 400 676 179  
Injection pump  
Pump designation : PE6A90D320RS2577  
EP type number : 0 410 696 181  
Governor  
Governor design. : RSV250...750A7C2202R  
Governor no. : 0 420 233 202

Customer-spec. information  
Customer : DAF

Engine : DT 615

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00X1.50X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.20...2.30  
                  : (2.15...2.35)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 8.50...9.50  
Difference ° CS : 2.50...3.50

## BASIC SETTING

1st speed 1/mi: 700

Contr.-rod trav.mm: 11.00...11.10

Del.quantity cm3/ : 7.4...7.6

100H.: (7.2...7.8)

Dispersion cm3/ : 0.4

100H.: (0.5)

2nd speed 1/min: 250.0

Contr.-rod trav. m: 5.9...6.1

Del.quantity cm3/ : 0.8...1.4

100H.: (0.6...1.6)

Dispersion cm3/ : 0.2

100H.: (0.4)

## SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Contr.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 5.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 700

Del.quantity cm3/ : 74.0...76.0

1000H.: (72.0...78.0)

Dispersion cm3/ : 4.00

1000H.: (5.50)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 40...48

Testing:

1st c-rod trav.mm : 10.00

Speed 1/min : 750...755

2nd c-rod trav.mm : 4.00

Speed 1/min : 780...795

4th speed 1/min : 950  
C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever  
position degrees: 17...25  
Setting point w/out aux. spring  
Speed 1/min : 250  
Contr.-rod trav.mm: 6.0

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 250  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 280...340

SET IDLE AUXILIARY SPRING

Contr.-rod trav.mm: 2.00

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DAF 8,3 K 6  
Edition : 07.11.86  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 676 184  
  
Injection pump  
Pump designation : PE6A95D41ORS2525  
EP type number : 0 410 696 987  
Governor  
Governor design. : RSV250...1200A5C2199  
-1L  
Governor no. : 0 420 232 450  
  
Customer-spec. information  
Customer : DAF

Engine : DHTD 825

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.50  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.00...2.10  
                  : (1.95...2.15)  
Contr.-rod trav.mm: 7.50...10.50  
Cam sequence : 1- 5- 3- 6- 2- 4

K07

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + -<sup>o</sup> : 0.50 (0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 8.50...9.50  
& c-rod trav max. : 21.0  
Difference<sup>o</sup> CS : 3.00...4.00

## BASIC SETTING

1st speed 1/mi: 1000  
-----  
Contr.-rod trav.mm: 12.60...12.70  
-----  
Del.quantity cm<sup>3</sup>/ : 10.9...11.0  
-----  
100H.: (10.7...11.2)  
-----  
Dispersion cm<sup>3</sup>/ : 0.3  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 250.0  
Contr.-rod trav. m: 6.0...6.2  
Del.quantity cm<sup>3</sup>/ : 0.7...1.1  
100H.: (0.4...1.3)  
Dispersion cm<sup>3</sup>/ : 0.3  
100H.: (0.5)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 4.25

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1000  
Charge press. hPa : 700  
Del.quantity cm<sup>3</sup>/ : 109.0...110.0  
1000H.: (107.0...112.0)  
Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 51...59

Testing:  
1st c-rod trav.mm : 11.60

Speed 1/min : 1230...1240  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1290...1320  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1310...1340  
4th speed 1/min : 1490  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 17...25  
Setting point w/out aux. spring  
Speed 1/min : 250  
Contr.-rod trav.mm: 5.6  
Speed 1/min : 250  
C-rod trav.mm : 6.00...6.20  
C-rod trav.mm : 2.00  
Speed 1/min : 445...505

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1000  
C-rod trav.mm : 13.40...13.50  
2nd speed 1/min : 400  
C-rod trav.mm : 13.60...13.70  
3rd speed 1/min : 300  
C-rod trav.mm : 13.80...14.30

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 1000  
Pressure hPa : 700  
Contr.-rod trav.mm: 12.60...12.70

#### Measurement

Speed 1/min : 1000  
1st pressure hPa : -  
C-rod trav.mm : 11.50...11.60  
2nd pressure hPa : 300  
C-rod trav.mm : 12.30...12.40  
3rd pressure hPa : 260  
C-rod trav.mm : 11.70...11.90

#### FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : -  
Speed 1/min : 600  
Del. quantity cm<sup>3</sup>/ : 85.5...86.5  
1000H.: (83.5...88.5)

Remarks:

K08

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 4,0 A  
 Edition : 09.03.87  
 Superceeded : 12.84  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 844 083  
 Injection pump  
 Pump designation : PES4A90D41ORS2666  
 EP type number : 0 410 894 029  
 Governor  
 Governor design. : RQV300...1400AB1065-SL  
 Governer no. : 0 420 212 169  
 Customer-spec. information  
 Customer : DAIMLER-BENZ  
 Engine : OM364  
 1st version kW : 66.0  
 Speed 1/min: 2800

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.00  
 Calibrating nozzle-holder assembly : 0 681 343 009  
 Opening pressure, bar : 172...175  
 Test inj. tubing : 1 680 750 015  
 Outside diameter x Wall thickness x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant. per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 2.25...2.35  
 : (2.20...2.40)

K09

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 4- 2

SD ang. spacing°CS: 0-90-180-270  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1400  
 -----  
 Contr.-rod trav.mm: 10.90...11.00  
 -----  
 Del.quantity cm3/ : 6.3...6.4  
 -----  
 100H.: (6.1...6.6)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.5)  
 -----  
 2nd speed 1/min: 300.0  
 Contr.-rod trav. m: 8.6...8.8  
 Del.quantity cm3/ : 0.8...1.2  
 100H.: (0.6...1.4)  
 Dispersion cm3/ : 0.2  
 100H.: (0.4)

(B) Setting of injection pump with externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 300  
 Sleeve travel mm: 0.80...1.30  
 2nd speed 1/min: 500  
 Sleeve travel mm: 2.30...2.80  
 3rd speed 1/min: 750  
 Sleeve travel mm: 4.10...4.30  
 4th speed 1/min: 1500  
 Sleeve travel mm: 8.50...8.60

**SLEEVE POSITION**

Control-lever position  
 Degree: -1  
 Speed 1/min: 1500  
 Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1400  
 Del.quantity cm3/ : 63.0...64.0  
 1000H.: (61.0...66.0)  
 Dispersion cm3/ : 3.00  
 1000H.: (5.00)

**HIGHEST RATED SPEED**

1st version

Control-lever  
position degrees: 58...66

Testing:  
1st c-rod trav.mm : 9.90  
Speed 1/min : 1450...1460  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1560...1590  
4th speed 1/min : 1630  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 10.20  
Speed 1/min : 300  
C-rod trav.mm : 8.60...8.80

#### CONSTANT REGULATION

Speed 1/min : 540...680

#### TORQUE CONTROL

Dimension a mm : 1.00  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 10.90...11.00  
2nd speed 1/min : 630  
C-rod trav.mm : 12.20...12.30  
3rd speed 1/min : 900  
C-rod trav.mm : 11.60...11.80

#### SWITCH-OVER POINT

Speed 1/min : 220 (240)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 630  
Del.quantity cm<sup>3</sup>/ : 55.5...58.5  
1000H.: (53.0...61.0)  
Speed 1/min : 900  
Del.quantity cm<sup>3</sup>/ : 54.5...57.5  
1000H.: (52.0...60.0)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MAN 11,1P23  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 846 516  
 Injection pump  
 Pump designation : PES6A95D410LS2542  
 EP type number : 0 410 896 936  
 Governor  
 Governor design. : RQV250...1100AB1177L  
 Govenrer no. : 0 420 212 162

Customer-spec. information  
 Customer : MAN

Engine : D2566 M/MF

1st version kW : 177.0  
 Speed 1/min: 2200

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.50...1.60  
 : (1.45...1.65)  
 Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 6

**BASIC SETTING**

1st speed 1/mi: 700

Contr.-rod trav.mm: 12.00...12.10

Del.quantity cm<sup>3</sup>/ : 10.8...11.0

100H.: (10.6...11.2)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.6)

2nd speed 1/min: 250.0

Contr.-rod trav. m: 6.7...6.9

Del.quantity cm<sup>3</sup>/ : 0.9...1.4

100H.: (0.6...1.6)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.5)

(B) Setting of injection pump with  
 externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 150

Sleeve travel mm: 0.40...0.70

2nd speed 1/min: 550

Sleeve travel mm: 3.60...4.00

3rd speed 1/min: 900

Sleeve travel mm: 5.60...6.10

4th speed 1/min: 1200

Sleeve travel mm: 9.50...10.20

**SLEEVE POSITION**

Control-lever position

Degree: -1

Speed 1/min: 1115

Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 700

Del.quantity cm<sup>3</sup>/ : 108.5...110.5

1000H.: (106.5...112.5)

Dispersion cm<sup>3</sup>/ : 3.50

1000H.: (6.00)

**HIGHEST RATED SPEED**

1st version

Control-lever  
position degrees: 43...51

Testing:

1st c-rod trav.mm : 11.00  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1180...1210  
4th speed 1/min : 1300  
C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I

Control-lever  
position degrees: 9...17

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 8.20  
Speed 1/min : 250  
C-rod trav.mm : 6.60...6.80  
C-rod trav.mm : 2.00  
Speed 1/min : 335...395

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 12.00...12.10  
2nd speed 1/min : 500  
C-rod trav.mm : 12.00...12.20

SWITCH-OVER POINT

Speed 1/min : 170 (190)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 107.5...111.5  
1000H.: (105.0...114.0)  
Speed 1/min : 1100  
Del.quantity cm<sup>3</sup>/ : 100.0...103.0  
1000H.: (97.5...105.5)

Remarks:

: MAN-NR. 2-7440



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MAN 11,1P20  
 Edition : 09.03.87  
 Superceeded : S.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 846 518  
 Injection pump  
 Pump designation : PES6A9SD410LS2542  
 EP type number : 0 410 896 936  
 Governor  
 Governor design. : RQV250...1100AB1177L  
 Govenrer no. : 0 420 212 162

Customer-spec. information  
 Customer : MAN

Engine : D2566 M/MF

1st version kW : 177.0  
 Speed 1/min: 2200

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.50...1.60  
 : (1.45...1.65)  
 Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 6

**BASIC SETTING**

1st speed 1/mi: 700

Contr.-rod trav.mm: 12.00...12.10

Del.quantity cm3/ : 10.8...11.0

100H.: (10.6...11.2)

Dispersion cm3/ : 0.3

100H.: (0.6)

2nd speed 1/min: 250.0

Contr.-rod trav. m: 6.7...6.9

Del.quantity cm3/ : 0.9...1.4

100H.: (0.6...1.6)

Dispersion cm3/ : 0.3

100H.: (0.5)

(B) Setting of injection pump with  
 externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 150

Sleeve travel mm: 0.40...0.70

2nd speed 1/min: 550

Sleeve travel mm: 3.60...4.00

3rd speed 1/min: 900

Sleeve travel mm: 5.60...6.10

4th speed 1/min: 1200

Sleeve travel mm: 9.50...10.20

**SLEEVE POSITION**

Control-lever position

Degree: -1

Speed 1/min: 1115

Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 700

Del.quantity cm3/ : 108.5...110.5

1000H.: (106.5...112.5)

Dispersion cm3/ : 3.50

1000H.: (6.00)

**HIGHEST RATED SPEED**

1st version

Control-lever  
position degrees: 43...51

Testing:  
1st c-rod trav.mm : 11.00  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1180...1210  
4th speed 1/min : 1300  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 9...17

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 8.20  
Speed 1/min : 250  
C-rod trav.mm : 6.60...6.80  
C-rod trav.mm : 2.00  
Speed 1/min : 335...395

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 12.00...12.10  
2nd speed 1/min : 500  
C-rod trav.mm : 12.00...12.20

#### SWITCH-OVER POINT

Speed 1/min : 170 (190)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 107.5...111.5  
1000H.: (105.0...114.0)  
Speed 1/min : 1100  
Del.quantity cm<sup>3</sup>/ : 100.0...103.0  
1000H.: (97.5...105.5)

Remarks:

: MAN-NR. 2-7441

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 6,0 A  
Edition : 09.03.87  
Superceeded : 6.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 846 522  
  
Injection pump  
Pump designation : PES6A90D410RS2667  
EP type number : 0 410 896 080  
Governor  
Governor design. : RQV300...1400AB1065-4L  
Governor no. : 0 420 212 168

Customer-spec. information  
Customer : DAIMLER-BENZ

Engine : OM 366

1st version kW : 100.0  
Speed 1/min: 2800

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.25...2.35  
: (2.20...2.40)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 11.10...11.20  
-----  
Del.quantity cm3/ : 6.3...6.4  
-----  
100H.: (6.1...6.6)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 300.0  
Contr.-rod trav. m: 8.9...9.1  
Del.quantity cm3/ : 0.9...1.3  
100H.: (0.7...1.5)  
Dispersion cm3/ : 0.2  
100H.: (0.4)

(B) Setting of injection pump with  
externally-mounted governor

## SLEEVE TRAVELS

1st speed 1/min: 300  
Sleeve travel mm: 0.80...1.30  
2nd speed 1/min: 500  
Sleeve travel mm: 2.30...2.80  
3rd speed 1/min: 750  
Sleeve travel mm: 4.10...4.30  
4th speed 1/min: 1500  
Sleeve travel mm: 8.50...8.60

## SLEEVE POSITION

Control-lever position  
Degree: -1  
Speed 1/min: 1500  
Cont.-rod travelmm: 15.20...17.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm3/ : 63.5...64.5  
1000H.: (61.5...66.5)  
Dispersion cm3/ : 3.00  
1000H.: (4.50)

## HIGHEST RATED SPEED

1st version

Control-lever  
position degrees: 61...69

Testing:  
1st c-rod trav.mm : 10.10  
Speed 1/min : 1460...1470  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1560...1590  
4th speed 1/min : 1630  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 21...29

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 10.30  
Speed 1/min : 300  
C-rod trav.mm : 8.90...9.10

#### CONSTANT REGULATION

Speed 1/min : 540...680

#### TORQUE CONTROL

Dimension a mm : 1.20  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 11.10...11.20  
2nd speed 1/min : 500  
C-rod trav.mm : 12.30...12.40  
3rd speed 1/min : 900  
C-rod trav.mm : 11.90...12.10  
4th speed 1/min : 1100  
C-rod trav.mm : 11.40...11.70

#### SWITCH-OVER POINT

Speed 1/min : 220 (240)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm<sup>3</sup>/ : 52.0...54.0  
1000H.: (49.5...56.5)  
Speed 1/min : 900  
Del.quantity cm<sup>3</sup>/ : 55.0...58.0  
1000H.: (52.5...60.5)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MAN 11,4 B1  
 Edition : 09.03.87  
 Superceeded : 6.83  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 846 524  
 Injection pump  
 Pump designation : PES6A95D410LS2639-1  
 EP type number : 0 410 896 920  
 Governor  
 Governor design. : RQ250/1100AB1137-7L  
 Governor no. : 0 420 200 089

Customer-spec. information  
 Customer : MAN

Engine : D2566MUH/MUM

1st version kW : 176.0  
 Speed 1/min: 2200

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.50...1.60  
 : (1.45...1.55)

Contr.-rod trav.mm: 9.00...12.00

K17

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 6

**BASIC SETTING**

1st speed 1/mi: 700

Contr.-rod trav.mm: 13.60...13.70

Del.quantity cm3/ : 12.0...12.2

100H.: (11.8...12.4)

Dispersion cm3/ : 0.3

100H.: (0.6)

2nd speed 1/min: 250.0

Contr.-rod trav. m: 7.5...7.7

Del.quantity cm3/ : 0.9...1.5

100H.: (0.6...1.7)

Dispersion cm3/ : 0.3

100H.: (0.5)

**SLEEVE POSITION**

Control-lever position

Degree: -1

Speed 1/min: 600

Cont.-rod travelmm: 15.60...16.40

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 700

Del.quantity cm3/ : 120.5...122.5

1000H.: (118.5...124.5)

Dispersion cm3/ : 3.50

1000H.: (6.00)

**HIGHEST RATED SPEED**

Setting point:

Speed 1/min : 600

Contr.-rod trav.mm: 16.0

Testing:

1st c-rod trav.mm : 12.60

Speed 1/min : 1145...1160

2nd c-rod trav.mm : 4.00

Speed 1/min : 1270...1300

4th speed 1/min : 1350

C-rod trav.mm : 0.00...1.00

**LOWEST RATED SPEED I**

Setting point w/out aux. spring  
Speed 1/min : 250  
Contr.-rod trav.mm: 7.0

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 8.50  
Speed 1/min : 250  
C-rod trav.mm : 6.90...7.10  
C-rod trav.mm : 2.00  
Speed 1/min : 395...435  
Speed 1/min : 450  
C-rod trav.mm max : 1.00

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 13.60...13.70  
2nd speed 1/min : 500  
C-rod trav.mm : 13.60...13.80

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm3/ : 119.0...123.0  
1000H.: (116.5...125.5)  
Speed 1/min : 1100  
Del.quantity cm3/ : 134.5...137.5  
1000H.: (132.0...140.0)

Remarks:

: MAN-NR. 2-7357

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 6,0 A 3  
 Edition : 30.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 846 558  
 Injection pump  
 Pump designation : PES6A90D41ORS2667  
 EP type number : 0 410 896 080  
 Governor  
 Governor design. : RQV300...1300AB1065-8L  
 Governor no. : 0 420 212 200

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM 366

1st version kW : 97.0  
 Speed 1/min: 2600

**TEST BENCH REQUIREMENTS**

Calibrating-oil inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder assembly : 0 681 343 009

Opening pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.25...2.35  
 : (2.20...2.40)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1300

Contr.-rod trav.mm: 11.20...11.30

Del.quantity cm<sup>3</sup>/ : 6.3...6.4

100H.: (6.1...6.6)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.5)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 9.1...9.3

Del.quantity cm<sup>3</sup>/ : 0.9...1.5

100H.: (0.7...1.7)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.4)

(B) Setting of injection pump with externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 300

Sleeve travel mm: 0.80...1.30

2nd speed 1/min: 500

Sleeve travel mm: 2.30...2.80

3rd speed 1/min: 750

Sleeve travel mm: 4.10...4.30

4th speed 1/min: 1500

Sleeve travel mm: 8.50...8.60

**SLEEVE POSITION**

Control-lever position

Degree: -1

Speed 1/min: 1500

Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1300

Del.quantity cm<sup>3</sup>/ : 63.0...64.0

1000H.: (61.0...66.0)

Dispersion cm<sup>3</sup>/ : 3.00

1000H.: (5.00)

**HIGHEST RATED SPEED**

1st version

Control-lever  
position degrees: 54...62

Testing:  
1st c-rod trav.mm : 10.20  
Speed 1/min : 1340...1350  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1465...1495  
4th speed 1/min : 1600  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 10.60  
Speed 1/min : 300  
C-rod trav.mm : 9.10...9.30

#### CONSTANT REGULATION

Speed 1/min : 525...650

#### TORQUE CONTROL

Dimension a mm : 1.00  
Torque-control curve - 1st version  
1st speed 1/min : 1300  
C-rod trav.mm : 11.20...11.30  
2nd speed 1/min : 750  
C-rod trav.mm : 12.00...12.10  
3rd speed 1/min : 950  
C-rod trav.mm : 11.70...11.90  
4th speed 1/min : 1100  
C-rod trav.mm : 11.30...11.60

#### SWITCH-OVER POINT

Speed 1/min : 220 (240)

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm<sup>3</sup>/ : 55.0...57.0  
1000h.: (52.5...59.5)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : LIE 8,4 B 1  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 846 562  
 Injection pump  
 Pump designation : PES6A100D41GRS2687  
 EP type number : 0 410 806 001  
 Governor  
 Governor design. : RQV400...1000AB1231L  
 Governor no. : 0 420 212 206

Customer-spec. information  
 Customer : LIEBHERR

Engine : D906T

1st version kW : 170.0  
 Speed 1/min: 2000

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 40...45  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 008

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 2.70...2.80  
 : (2.65...2.85)  
 Contr.-rod trav.mm: 9.00...12.00

K21

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + -<sup>0</sup> : 0.50 (0.75)

**START OF DELIVERY DIFFERENCE**

betw.c-rod trav.mm: 9.00...12.00  
 Difference<sup>0</sup> CS : 4.00...5.00

**BASIC SETTING**

1st speed 1/mi: 1000  
 -----  
 Contr.-rod trav.mm: 13.30...13.40  
 -----  
 Del.quantity cm3/ : 13.6...13.8  
 -----  
 100H.: (13.4...14.0)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.6)  
 -----  
 2nd speed 1/min: 400.0  
 Contr.-rod trav. m: 6.8...7.0  
 Del.quantity cm3/ : 1.0...1.6  
 100H.: (0.7...1.8)  
 Dispersion cm3/ : 0.3  
 100H.: (0.5)

(B) Setting of injection pump with  
 externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 440  
 Sleeve travel mm: 2.10...2.30  
 2nd speed 1/min: 500  
 Sleeve travel mm: 3.00...3.50  
 3rd speed 1/min: 585  
 Sleeve travel mm: 3.50...4.00  
 4th speed 1/min: 1045  
 Sleeve travel mm: 8.10...8.20  
 5th speed 1/min: 1135  
 Sleeve travel mm: 9.40...9.70

**SLEEVE POSITION**

Control-lever position  
 Degree: -1  
 Speed 1/min: 1065  
 Contr.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1000  
 Charge press. hPa : 700

Del. quantity cm<sup>3</sup>/ : 136.5...138.5  
1000H.: (134.5...140.5)  
Dispersion cm<sup>3</sup>/ : 3.50  
1000H.: (6.00)

#### HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 62...70

Testing:  
1st c-rod trav.mm : 12.30  
Speed 1/min : 1040...1050  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1130...1160  
4th speed 1/min : 1250  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 12...19

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 8.30  
Speed 1/min : 400  
C-rod trav.mm : 6.80...7.00

#### CONSTANT REGULATION

Speed 1/min : 425...530

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1000  
C-rod trav.mm : 13.30...13.40  
2nd speed 1/min : 500  
C-rod trav.mm : 13.30...13.50

compensator (LDA,ADA,ALDA)

1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 700  
Contr.-rod trav.mm: 13.30...13.40

#### Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 12.10...12.20  
2nd pressure hPa : 435  
C-rod trav.mm : 12.90...13.00  
3rd pressure hPa : 410  
C-rod trav.mm : 12.30...12.50

#### SWITCH-OVER POINT

Speed 1/min : 320 (340)

#### FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : -  
Speed 1/min : 500  
Del. quantity cm<sup>3</sup>/ : 100.0...102.0  
1000H.: (98.0...104.0)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 19  
 Edition : 09.03.87  
 Superceeded : 10.85  
 Calibrating oil : ISO-4113

Combination no. : 0 400 863 009

Injection pump  
 Pump designation : PES3A85D410/3RS2642  
 EP type number : 0 410 883 989  
 Governor  
 Governor design. : RSV325...1250A2C2168  
 -2L  
 Governor no. : 0 420 232 437

Customer-spec. information  
 Customer : KHD

Engine : F3L913

1st version kW : 45.0  
 Speed 1/min: 2500

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.50...2.60  
 : (2.45...2.65)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 2

SD ang. spacing<sup>o</sup>CS: 0-120-240  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1250  
 -----  
 Contr.-rod trav.mm: 10.90...11.00  
 -----  
 Del.quantity cm3/ : 7.0...7.1  
 -----  
 100H.: (6.8...7.3)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.5)  
 -----  
 2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 7.9...8.1  
 Del.quantity cm3/ : 0.7...1.3  
 100H.: (0.5...1.5)  
 Dispersion cm3/ : 0.2  
 100H.: (0.4)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 4.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1250  
 Del.quantity cm3/ : 70.5...71.5  
 1000H.: (68.5...73.5)  
 Dispersion cm3/ : 3.00  
 1000H.: (5.00)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 47...55

Testing:  
 1st c-rod trav.mm : 9.90  
 Speed 1/min : 1290...1300  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1345...1375  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1365...1395  
 4th speed 1/min : 1520

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 18...26

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 7.5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 325

C-rod trav.mm : 7.90...8.10

C-rod trav.mm : 2.00

Speed 1/min : 480...540

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1250

C-rod trav.mm : 10.90...11.00

3rd speed 1/min : 800

C-rod trav.mm : 11.30...11.40

4th speed 1/min : 1045

C-rod trav.mm : 11.00...11.20

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del. quantity cm<sup>3</sup>/ : 62.5...64.5

1000H.: (60.0...67.0)

Remarks:

: DX 3.50

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 30  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 863 012  
 Injection pump  
 Pump designation : PES3A85D410/3RS2731  
 EP type number : 0 410 883 988  
 Governor  
 Governor design. : RSV325...1250A2C2168  
 -3L  
 Govenner no. : 0 420 232 475

Customer-spec. information  
 Customer : KHD

Engine : F3L913

1st version kW : 44.0  
 Speed 1/min: 2500

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.50...2.60  
 : (2.45...2.65)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 2

SD ang. spacing°CS: 0-120-240  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1250

Contr.-rod trav.mm: 9.90...10.00

Del.quantity cm3/ : 6.8...6.9  
 100H.: (6.6...7.1)

Dispersion cm3/ : 0.3  
 100H.: (0.5)

2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 5.9...6.1  
 Del.quantity cm3/ : 1.0...1.6  
 100H.: (0.8...1.8)  
 Dispersion cm3/ : 0.2  
 100H.: (0.4)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 4.50

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1250  
 Del.quantity cm3/ : 68.5...69.5  
 1000H.: (66.5...71.5)  
 Dispersion cm3/ : 3.00  
 1000H.: (5.00)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 42...50

Testing:  
 1st c-rod trav.mm : 8.90  
 Speed 1/min : 1290...1300  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1315...1345  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1335...1365  
 4th speed 1/min : 1500

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 13...21

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 5.5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 325

C-rod trav.mm : 5.40...5.60

C-rod trav.mm : 2.00

Speed 1/min : 465...525

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1250

C-rod trav.mm : 9.90...10.00

2nd speed 1/min : 500

C-rod trav.mm : 10.30...10.40

4th speed 1/min : 960

C-rod trav.mm : 10.10...10.30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del.quantity cm3/ : 58.0...60.0

1000H.: (55.5...62.5)

Remarks:

: TKS 2.60

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 3,0 D  
Edition : 09.03.87  
Superseded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 863 013  
Injection pump  
Pump designation : PES3A90D410/3RS2740  
EP type number : 0 410 893 006  
Governor  
Governor design. : RSV325...1150AOC2219  
Governor no. : 0 420 232 466  
Customer-spec. information  
Customer : KHD  
Engine : F3L913G  
1st version kW : 36.0  
Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 2.50...2.60  
: (2.45...2.65)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 2

SD ang. spacing°CS: 0-120-240  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1050  
-----  
Contr.-rod trav.mm: 9.10...9.20  
-----  
Del.quantity cm3/ : 6.4...6.5  
-----  
100H.: (6.2...6.7)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 375.0  
Contr.-rod trav. m: 5.9...6.1  
Del.quantity cm3/ : 1.1...1.7  
100H.: (0.9...1.9)  
Dispersion cm3/ : 0.2  
100H.: (0.4)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 3.25

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1050  
Del.quantity cm3/ : 64.0...65.0  
1000H.: (62.0...67.0)  
Dispersion cm3/ : 3.00  
1000H.: (4.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 56...64

Testing:  
1st c-rod trav.mm : 8,10  
Speed 1/min : 1090...1100  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1120...1150  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1135...1165  
4th speed 1/min : 1300

C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever

position degrees: 23...31

Setting point w/out aux. spring

Speed 1/min : 375

Contr.-rod trav.mm: 5.5

#### Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 375

C-rod trav.mm : 5.40...5.60

C-rod trav.mm : 2.00

Speed 1/min : 470...530

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050

C-rod trav.mm : 9.10...9.20

2nd speed 1/min : 350

C-rod trav.mm : 9.40...9.50

3rd speed 1/min : 600

C-rod trav.mm : 9.20...9.40

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 350

Del.quantity cm<sup>3</sup>/ : 45.0...47.0

1000H.: (42.5...49.5)

Speed 1/min : 600

Del.quantity cm<sup>3</sup>/ : 51.5...53.5

1000H.: (49.0...56.0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 4,1 D 5  
Edition : 09.05.87  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 864 068  
Injection pump  
Pump designation : PES4A85D410/3RS2638  
EP type number : 0 410 884 950  
Governor  
Governor design. : RSV325...900A8C602-3  
L  
Governor no. : 0 420 232 460  
Customer-spec. information  
Customer : KHD

Engine : BF4L913

1st version kW : 64.0  
Speed 1/min: 1800

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.50...2.60  
: (2.45...2.65)

L02

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 4- 2

SD ang. spacing<sup>0</sup>CS: 0-90-180-270  
Tolerance + -<sup>g</sup> : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 850  
-----  
Contr.-rod trav.mm: 13.50...13.60  
-----  
Del.quantity cm3/ : 8.3...8.4  
-----  
100H.: (8.1...8.6)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 325.0  
Contr.-rod trav. m: 8.4...8.6  
Del.quantity cm3/ : 0.8...1.4  
100H.: (0.6...1.6)  
Dispersion cm3/ : 0.2  
100H.: (0.4)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 3.50

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 850  
Del.quantity cm3/ : 83.0...84.0  
1000H.: (81.0...86.0)  
Dispersion cm3/ : 3.00  
1000H.: (4.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 31...39

Testing:  
1st c-rod trav.mm : 12.50  
Speed 1/min : 890...990  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 955...985  
4th speed 1/min : 10<sup>70</sup>  
C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 12...20

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 8.5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 325

C-rod trav.mm : 8.40...8.60

C-rod trav.mm : 2.00

Speed 1/min : 365...425

SET IDLE AUXILIARY SPRING

Contr.-rod trav.mm: 2.00

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 850

C-rod trav.mm : 13.50...13.60

2nd speed 1/min : 500

C-rod trav.mm : 13.50...13.70

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 1 G 31  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 864 069  
 Injection pump  
 Pump designation : PES4A85D410/3RS2732  
 EP type number : 0 410 884 947  
 Governor  
 Governor design. : RSV325...1175ABC2163  
 -3L  
 Governor no. : 0 420 232 474

Customer-spec. information  
 Customer : KHD

Engine : F4L913

1st version kW : 55.0  
 Speed 1/min: 2350

TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.00  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.50...2.60  
 : (2.45...2.65)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 4- 2

SD ang. spacing<sup>o</sup>CS: 0-90-180-270  
 Tolerance + -<sup>o</sup> : 0.50 (0.75)

BASIC SETTING

1st speed 1/mi: 1175

Contr.-rod trav.mm: 9.80...9.90

Del.quantity cm3/ : 6.7...6.8

100H.: (6.5...7.0)

Dispersion cm3/ : 0.3

100H.: (0.4)

2nd speed 1/min: 325.0

Contr.-rod trav. m: 5.9...6.1

Del.quantity cm3/ : 1.0...1.6

100H.: (0.8...1.8)

Dispersion cm3/ : 0.2

100H.: (0.4)

SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Contr.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 4.25

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1175

Del.quantity cm3/ : 67.0...68.0

1000H.: (65.0...70.0)

Dispersion cm3/ : 3.00

1000H.: (4.50)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 53...61

Testing:

1st c-rod trav.mm : 8.80

Speed 1/min : 1215...1225

2nd c-rod trav.mm : 4.00

Speed 1/min : 1235...1265

3rd c-rod trav.mm : 4.00

Speed 1/min : 1255...1285

4th speed 1/min : 1420

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 15...23

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 5.6

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 325

C-rod trav.mm : 5.40...5.90

C-rod trav.mm : 2.00

Speed 1/min : 460...520

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1175

C-rod trav.mm : 9.80...9.90

2nd speed 1/min : 500

C-rod trav.mm : 10.30...10.40

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del.quantity cm<sup>3</sup>/ : 58.0...60.0

1000H.: (55.5...62.5)

Remarks:

: TKS 2.80

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 4  
 Edition : 30.03.87  
 Superceeded : 9.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 866 111  
 Injection pump  
 Pump designation : PES6A85D410/3RS2611  
 EP type number : 0 410 886 902  
 Governor  
 Governor design. : RSV325...1200AOC2148  
 L  
 Govenner no. : 0 420 232 293

Customer-spec. information  
 Customer : KHD

Engine : F6L913

1st version kW : 84.0  
 Speed 1/min: 2400

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.50...2.60  
 : (2.45...2.65)

L06

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1200  
 -----

Contr.-rod trav.mm: 11.30...11.40  
 -----

Del.quantity cm3/ : 6.9...7.0  
 -----

100H.: (6.7...7.2)  
 -----

Dispersion cm3/ : 0.3  
 -----

100H.: (0.4)  
 -----

2nd speed 1/min: 325.0

Contr.-rod trav. m: 8.4...8.6

Del.quantity cm3/ : 0.8...1.4

100H.: (0.6...1.6)

Dispersion cm3/ : 0.2

100H.: (0.4)

**SLEEVE POSITION**

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 4.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1200

Del.quantity cm3/ : 69.5...70.5

1000H.: (67.5...72.5)

Dispersion cm3/ : 3.00

1000H.: (4.50)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 53...61

Testing:

1st c-rod trav.mm : 10.30

Speed 1/min : 1240...1250

2nd c-rod trav.mm : 4.00

Speed 1/min : 1315...1345

4th speed 1/min : 1425

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 28...36

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 8.5

Speed 1/min : 325

C-rod trav.mm : 8.40...8.60

C-rod trav.mm : 2.00

Speed 1/min : 450...510

SET IDLE AUXILIARY SPRING

Contr.-rod trav.mm: 2.00

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1200

C-rod trav.mm : 11.30...11.40

2nd speed 1/min : 500

C-rod trav.mm : 11.80...11.90

4th speed 1/min : 975

C-rod trav.mm : 11.60...11.90

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del.quantity cm<sup>3</sup>/ : 63.5...65.5

1000H.: (61.0...68.0)

Remarks:

: DX

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 1 G 24  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 866 118  
 Injection pump  
 Pump designation : PES6A85D410/3RS2611  
 EP type number : 0 410 886 902  
 Governor  
 Governor design. : RSV325...1150A8C604L  
 Governor no. : 0 420 232 319

Customer-spec. information  
 Customer : KHD

Engine : F6L913

1st version kW : 78.0  
 Speed 1/min: 2300

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.00  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 2.50...2.60  
 : (2.45...2.65)  
 Contr.-rod trav.mm: 9.00...12.00

LOB

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + -<sup>o</sup> : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1150  
 -----  
 Contr.-rod trav.mm: 10,20...10,30  
 -----  
 Del.quantity cm3/ : 6.0...6.1  
 -----  
 100H.: (5.8...6.3)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.5)  
 -----

2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 8.4...8.6  
 Del.quantity cm3/ : 1.0...1.6  
 100H.: (0.8...1.8)  
 Dispersion cm3/ : 0.2  
 100H.: (0.4)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 4.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1150  
 Del.quantity cm3/ : 60.5...61.5  
 1000H.: (58.5...63.5)  
 Dispersion cm3/ : 3.00  
 1000H.: (5.00)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 49...57

Testing:  
 1st c-rod trav.mm : 9.20  
 Speed 1/min : 1190...1200  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1215...1245  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1240...1270  
 4th speed 1/min : 1400  
 C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 13...21

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 8.0

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 325

C-rod trav.mm : 8.40...8.60

C-rod trav.mm : 2.00

Speed 1/min : 440...500

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1150

C-rod trav.mm : 10.20...10.30

2nd speed 1/min : 500

C-rod trav.mm : 10.20...10.40

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm3/ : 39.5...41.5

1000H.: (37.0...44.0)

Speed 1/min : 800

Del.quantity cm3/ : 48.0...50.0

1000H.: (45.5...52.5)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 6,1 A 6  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 866 119  
 Injection pump  
 Pump designation : PES6A85D410/3RS2532  
 EP type number : 0 410 886 909  
 Governor  
 Governor design. : RSV325...1150ABC673L  
 Governor no. : 0 420 232 329

Customer-spec. information  
 Customer : KHD

Engine : BF6L913

1st version kW : 112.0  
 Speed 1/min: 2300

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.85...2.05)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1150

Contr.-rod trav.mm: 13.00...13.10

Del.quantity cm<sup>3</sup>/ : 8.0...8.1

100H.: (7.8...8.3)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.4)

2nd speed 1/min: 325.0

Contr.-rod trav. m: 7.9...8.1

Del.quantity cm<sup>3</sup>/ : 1.1...1.7

100H.: (0.9...1.9)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.4)

**SLEEVE POSITION**

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 3.75

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1150

Del.quantity cm<sup>3</sup>/ : 80.5...81.5

1000H.: (78.5...83.5)

Dispersion cm<sup>3</sup>/ : 3.00

1000H.: (4.50)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 47...55

Testing:

1st c-rod trav.mm : 12.00

Speed 1/min : 1190...1200

2nd c-rod trav.mm : 4.00

Speed 1/min : 1225...1255

3rd c-rod trav.mm : 4.00

Speed 1/min : 1265...1295

4th speed 1/min : 1435

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever  
position degrees: 12...20  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 6.2

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 6.10...6.30  
C-rod trav.mm : 2.00  
Speed 1/min : 560...590

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1150  
C-rod trav.mm : 13.00...13.10  
2nd speed 1/min : 500  
C-rod trav.mm : 13.70...13.80  
4th speed 1/min : 980  
C-rod trav.mm : 13.30...13.50

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm3/ : 81.0...83.0  
1000H.: (78.5...85.5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 3,8 P 2  
Edition : 09.03.87  
Superceeded : 9.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 874 222  
  
Injection pump  
Pump designation : PES4A90D410RS2294  
EP type number : 0 410 894 011  
Governor  
Governor design. : RSV750...1400AOC2032  
-1L  
Governor no. : 0 420 232 455  
  
Customer-spec. information  
Customer : DAIMLER-BENZ  
  
Engine : OM 314  
  
1st version kW : 62.5  
Speed 1/min: 2800

## TEST BENCH REQUIREMENTS

Calibrating-gil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.00  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600  
  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.15...2.25  
: (2.10...2.30)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 4- 2

SD ang. spacing<sup>o</sup>CS: 0-90-180-270  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1345  
-----  
Contr.-rod trav.mm: 10.50...10.60  
-----  
Del.quantity cm3/ : 6.8...6.9  
-----  
100H.: (6.6...7.1)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.1)  
-----  
2nd speed 1/min: 750.0  
Contr.-rod trav. m: 5.9...6.1  
Del.quantity cm3/ : 1.7...2.3  
100H.: (1.5...2.5)  
Dispersion cm3/ : 0.2

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...1.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1345  
Del.quantity cm3/ : 68.0...69.0  
1000H.: (66.0...71.0)  
Dispersion cm3/ : 3.00  
1000H.: (1.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 47...55

## Testing:

1st c-rod trav.mm : 9.50  
Speed 1/min : 1385...1395  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1420...1450  
4th speed 1/min : 1500  
C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever  
position degrees: 26...34  
Setting point w/out aux. spring

Speed 1/min : 750  
Contr.-rod trav.mm: 6.0

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 750  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 765...795  
Speed 1/min : 820  
C-rod trav.mm max : 1.00

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 450  
C-rod trav.mm : 12.20...12.40  
2nd speed 1/min : 600  
C-rod trav.mm : 10.50...10.70

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : EIC 3,9 C 1  
Edition : 28.11.86  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 874 239

Injection pump  
Pump designation : PES4A90D32ORS2634  
EP type number : 0 410 894 026  
Governor  
Governor design. : RSV300...1050A1C2153  
-1R  
Governor no. : 0 420 233 193

Customer-spec. information  
Customer : EICHER

Engine : EDL4

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.20...2.30  
: (2.15...2.35)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 2- 4- 3

SD ang. spacing°CS: 0-90-180-270  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

## BASIC SETTING

1st speed 1/mi: 1050

Contr.-rod trav.mm: 12.60...12.70

Del.quantity cm3/ : 8.1...8.2

100H.: (7.9...8.4)

Dispersion cm3/ : 0.2

100H.: (0.3)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 10.9...11.1

Del.quantity cm3/ : 4.1...4.6

100H.: (3.9...4.8)

Dispersion cm3/ : 0.2

100H.: (0.3)

## SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 3.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1050

Del.quantity cm3/ : 81.0...82.0

1000H.: (79.0...84.0)

Dispersion cm3/ : 2.00

1000H.: (3.50)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 46...54

Testing:

1st c-rod trav.mm : 11.60

Speed 1/min : 1090...1100

2nd c-rod trav.mm : 4.00

Speed 1/min : 1105...1135

3rd c-rod trav.mm : 4.00

Speed 1/min : 1135...1165

4th speed 1/min : 1300

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 15...23

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 10.5

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 300

C-rod trav.mm : 10.90...11.10

C-rod trav.mm : 2.00

Speed 1/min : 420...480

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1050

C-rod trav.mm : 12.60...12.70

2nd speed 1/min : 500

C-rod trav.mm : 12.60...12.80

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm<sup>3</sup>/ : 69.5...71.5

1000H.: (67.0...74.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 4,0 C  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 874 243  
  
Injection pump  
Pump designation : PES4A90D41ORS2666-2L  
EP type number : 0 410 894 033  
Governor  
Governor design. : RSV350...1200A2C1139  
-2L  
Governor no. : 0 420 232 471  
  
Customer-spec. information  
Customer : DAIMLER-BENZ  
  
Engine : OM364  
  
1st version kW : 50.0  
Speed 1/min: 2400

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.00  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 015  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600  
  
(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 2.25...2.35  
: (2.20...2.40)

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 3- 4- 2

SD ang. spacing°CS: 0-90-180-270  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1200  
-----  
Contr.-rod trav.mm: 9.40...9.50  
-----  
Del.quantity cm3/ : 4.9...5.0  
-----  
100H.: (4.7...5.2)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.5)  
-----  
2nd speed 1/min: 350.0  
Contr.-rod trav. m: 8.1...8.7  
Del.quantity cm3/ : 1.0...1.2  
100H.: (0.8...1.4)  
Dispersion cm3/ : 0.2  
100H.: (0.4)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 5.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1200  
Del.quantity cm3/ : 49.0...50.0  
1000H.: (47.0...52.0)  
Dispersion cm3/ : 3.00  
1000H.: (5.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 45...53  
  
Testing:  
1st c-rod trav.mm : 8.40  
Speed 1/min : 1240...1245  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1286...1299  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1325...1355  
4th speed 1/min : 1530

C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever

position degrees: -3

Setting point w/out aux. spring

Speed 1/min : 350

Contr.-rod trav.mm: 8.40

#### Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 350

C-rod trav.mm : 8.30...8.50

C-rod trav.mm : 2.00

Speed 1/min : 530...590

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1200

C-rod trav.mm : 9.40...9.50

2nd speed 1/min : 800

C-rod trav.mm : 10.50...10.60

3rd speed 1/min : 950

C-rod trav.mm : 10.30...10.50

4th speed 1/min : 1050

C-rod trav.mm : 9.70...10.00

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del. quantity cm<sup>3</sup>/ : 45.0...47.0

1000H.: (42.5...49.5)

Speed 1/min : 1000

Del. quantity cm<sup>3</sup>/ : 48.0...51.0

1000H.: (45.5...53.5)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 4,0, C 1  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 874 244  
 Injection pump  
 Pump designation : PES4A90D41ORS2666-2  
 EP type number : 0 410 894 033  
 Governor  
 Governor design. : RSV350...1200A2C1139  
 =3L  
 Governer no. : 0 420 232 472

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM364

1st version kW : 57.0  
 Speed 1/min: 2400

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.25...2.35  
 : (2.20...2.40)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 3- 4- 2

SD ang. spacing°CS: 0-90-180-270  
 Tolerance + - ° : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1200

Contr.-rod trav.mm: 10.50...10.60

Del.quantity cm3/ : 5.5...5.6

100H.: (5.3...5.8)

Dispersion cm3/ : 0.3

100H.: (0.5)

2nd speed 1/min: 350.0

Contr.-rod trav. m: 8.1...8.9

Del.quantity cm3/ : 1.0...1.2

100H.: (0.8...1.4)

Dispersion cm3/ : 0.2

100H.: (0.4)

**SLEEVE POSITION**

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 4.75

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1200

Del.quantity cm3/ : 55.0...56.0

1000H.: (53.0...58.0)

Dispersion cm3/ : 3.00

1000H.: (5.00)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 54...62

Testing:

1st c-rod trav.mm : 9.50

Speed 1/min : 1240...1245

2nd c-rod trav.mm : 4.00

Speed 1/min : 1302...1315

3rd c-rod trav.mm : 4.00

Speed 1/min : 1335...1365

4th speed 1/min : 1450

C-rod trav.mm : 0.30...1.40  
5th speed 1/min : 1240...1250  
C-rod trav.mm : 9.50

LOWEST RATED SPEED I

Control-lever  
position degrees: -3

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 350  
C-rod trav.mm : 8.50...8.70  
C-rod trav.mm : 2.00  
Speed 1/min : 520...580

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1200  
C-rod trav.mm : 10.50...10.60  
2nd speed 1/min : 800  
C-rod trav.mm : 12.00...12.10  
3rd speed 1/min : 950  
C-rod trav.mm : 11.70...11.90  
4th speed 1/min : 1050  
C-rod trav.mm : 11.00...11.30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800  
Del.quantity cm3/ : 56.0...58.0  
1000H.: (53.5...60.5)  
Speed 1/min : 1050  
Del.quantity cm3/ : 56.0...58.0  
1000H.: (53.5...60.5)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : KHD 9,6 K 3  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 197  
 Injection pump  
 Pump designation : PES6A95D41ORS2416  
 EP type number : 0 410 896 961  
 Governor  
 Governor design. : RSV300...1325A8C616L  
 Govenor no. : 0 420 232 332

Customer-spec. information  
 Customer : KHD

Engine : F6L413FR

**TEST BENCH REQUIREMENTS**

Calibrating-gil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.85...2.05)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1315  
 -----  
 Contr.-rod trav.mm: 8.30...8.40  
 -----  
 Del.quantity cm3/ : 7.6...7.7  
 -----  
 100H.: (7.4...7.9)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.6)  
 -----  
 2nd speed 1/min: 300.0  
 Contr.-rod trav. m: 5.9...6.1  
 Del.quantity cm3/ : 1.0...1.6  
 100H.: (0.7...1.8)  
 Dispersion cm3/ : 0.3  
 100H.: (0.5)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
 Notch setting x : ?

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1315  
 Del.quantity cm3/ : 76.0...77.0  
 1000H.: (74.0...79.0)  
 Dispersion cm3/ : 3.00  
 1000H.: (6.00)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 65...73

Testing:  
 1st c-rod trav.mm : 7.30  
 Speed 1/min : 1355...1365  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1375...1405  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1390...1420  
 4th speed 1/min : 1550  
 C-rod trav.mm : 0.00...1.70

**LOWEST RATED SPEED I**

Control-lever

position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 300  
Contr.-rod trav.mm: 5.5  
Speed 1/min : 300  
C-rod trav.mm : 5.90...6.10  
C-rod trav.mm : 2.00  
Speed 1/min : 550...610

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1315  
C-rod trav.mm : 8.30...8.40  
2nd speed 1/min : 500  
C-rod trav.mm : 9.20...9.30  
3rd speed 1/min : 850  
C-rod trav.mm : 8.60...8.90

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 9,6 K 2  
 Edition : 30.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 199  
 Injection pump  
 Pump designation : PES6A95D410RS2416  
 EP type number : 0 410 896 961  
 Governor  
 Governor design. : RSV300...750A7C616L  
 Governor no. : 0 420 232 322

Customer-spec. information  
 Customer : KHD

Engine : F6L413FR

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1.90...2.00  
 : (1.95...2.05)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + -<sup>0</sup> : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 750  
 -----  
 Contr.-rod trav.mm: 9.20...9.30  
 -----  
 Del.quantity cm3/ : 7.6...7.7  
 -----  
 100H.: (7.4...7.9)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.6)  
 -----  
 2nd speed 1/min: 300.0  
 Contr.-rod trav. m: 6.4...6.6  
 Del.quantity cm3/ : 1.3...1.9  
 100H.: (1.0...2.1)  
 Dispersion cm3/ : 0.3  
 100H.: (0.5)

## SLEEVE POSITION

Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 750  
 Del.quantity cm3/ : 76.0...77.0  
 1000H.: (74.0...79.0)  
 Dispersion cm3/ : 3.00  
 1000H.: (6.00)

## HIGHEST RATED SPEED

1st version  
 Control-lever  
 position degrees: 42...50

Testing:  
 1st c-rod trav.mm : 8.20  
 Speed 1/min : 780...790  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 790...820  
 3rd c-rod trav.mm : 4.00  
 4th speed 1/min : 930  
 C-rod trav.mm : 0.30...1.40

## LOWEST RATED SPEED I

Control-lever  
 position degrees: 19...27  
 Setting point w/out aux. spring  
 Speed 1/min : 700  
 Contr.-rod trav.mm: 6.0

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 300  
C-rod trav.mm : 6.40...6.60  
C-rod trav.mm : 2.00  
Speed 1/min : 470...530

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 750  
C-rod trav.mm : 9.20...9.30  
2nd speed 1/min : 600  
C-rod trav.mm : 9.80...9.90  
3rd speed 1/min : 350  
C-rod trav.mm : 9.90...10.30

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 5,7 Q 14  
 Edition : 17.12.86  
 Superceeded : 10.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 255  
 Injection pump  
 Pump designation : PES6A90D410RS2293  
 EP type number : 0 410 896 031  
 Governor  
 Governor design. : RSV350...1300AOC783L  
 Governor no. : 0 420 232 409

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM 352 A

1st version kW : 110.3  
 Speed 1/min: 2600

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.15...2.25  
 : (2.10...2.30)  
 Contr.-rod trav.mm: 9.00...12.00

L25

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1300  
 -----  
 Contr.-rod trav.mm: 11.40...11.50  
 -----  
 Del.quantity cm3/ : 7.5...7.6  
 -----  
 100H.: (7.3...7.8)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.4)  
 -----  
 2nd speed 1/min: 350.0  
 Contr.-rod trav. m: 7.1...7.7  
 Del.quantity cm3/ : 1.0...1.2  
 100H.: (0.8...1.4)  
 Dispersion cm3/ : 0.2  
 100H.: (0.4)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...1.00

Governor-spring reload  
 Notch setting x : ?

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1300  
 Charge press. hPa : 700  
 Del.quantity cm3/ : 75.5...76.5  
 1000H.: (73.5...78.5)  
 Dispersion cm3/ : 3.00  
 1000H.: (4.50)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 61...69

Testing:  
 1st c-rod trav.mm : 10.40  
 Speed 1/min : 1340...1345  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1393...1406  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1430...1460  
 4th speed 1/min : 1600

C-rod trav.mm : 0.30...1.70  
5th speed 1/min : 1345...1355  
C-rod trav.mm : 10.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: -3  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 7.40

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.00  
Speed 1/min : 350  
C-rod trav.mm : 7.30...7.50  
C-rod trav.mm : 2.00  
Speed 1/min : 470...530

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1300  
C-rod trav.mm : 11.40...11.50  
3rd speed 1/min : 800  
C-rod trav.mm : 11.50...11.60  
4th speed 1/min : 1050  
C-rod trav.mm : 11.40...11.60

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 700  
Contr.-rod trav.mm: 11.50...11.60

#### Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 10.70...10.80  
2nd pressure hPa : 390  
C-rod trav.mm : 11.40...11.50  
3rd pressure hPa : 275  
C-rod trav.mm : 10.90...11.10

#### FUEL-DELIVERY CHARACTERISTICS

#### 1st version

Charge press. hPa : 700  
Speed 1/min : 500  
Del.quantity cm3/ : 62.0...64.0  
1000H.: (59.5...66.5)  
Dispersion cm3/ : -  
1000H.: (5.50)  
Charge press. hPa : 700  
Speed 1/min : 800  
Del.quantity cm3/ : 67.0...69.0  
1000H.: (64.5...71.5)

Dispersion cm3/ : -  
1000H.: 5.50  
Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 50.0...52.0  
1000H.: (47.5...54.5)  
Dispersion cm3/ : -  
1000H.: 5.50

#### Remarks:

Hydraulic latching of starting  
delivery.

Latching at 0.4 bar ... 0.5 bar.

Unlatching at 0.15 bar...0.25 bar.



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 5,7 Q 7  
 Edition : 09.03.87  
 Superceeded : 8.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 257  
 Injection pump  
 Pump designation : PES6A90D410RS2293Z  
 EP type number : 0 410 896 037  
 Governor  
 Governor design. : RSV350/1300A0C1101-2  
 L  
 Govenner no. : 0 420 232 411  
 Customer-spec. information  
 Customer : DAIMLER-BENZ  
 Engine : OM 352  
 1st version kW : 69.9  
 Speed 1/min: 2600

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.00  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009  
 Opening  
 pressure, bar : 172...175  
 Test inj. tubing : 1 680 750 003  
 Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x500

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 2.15...2.25  
 : (2.10...2.30)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1300  
 -----  
 Contr.-rod trav.mm: 8.20...8.30  
 -----  
 Del.quantity cm3/ : 4.4...4.5  
 -----  
 100H.: (4.2...4.7)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.4)  
 -----  
 2nd speed 1/min: 350.0  
 Contr.-rod trav. m: 6.6...7.2  
 Del.quantity cm3/ : 1.0...1.2  
 100H.: (0.8...1.4)  
 Dispersion cm3/ : 0.2  
 100H.: (-)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 4.75

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1300  
 Del.quantity cm3/ : 44.5...45.5  
 1000H.: (42.5...47.5)  
 Dispersion cm3/ : 3.00  
 1000H.: (4.50)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 59...67

Testing:  
 1st c-rod trav.mm : 7.20  
 Speed 1/min : 1340...1345  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1364...1377  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1390...1420  
 4th speed 1/min : 1500

C-rod trav.mm : 0.30...1.40  
5th speed 1/min : 1345...1355  
C-rod trav.mm : 7.20

LOWEST RATED SPEED I

Control-lever  
position degrees: -3  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 6.70

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 350  
C-rod trav.mm : 6.60...6.80  
C-rod trav.mm : 2.00  
Speed 1/min : 450...510

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1300  
C-rod trav.mm : 8.20...8.30  
2nd speed 1/min : 500  
C-rod trav.mm : 9.10...9.20  
3rd speed 1/min : 900  
C-rod trav.mm : 8.90...9.10  
4th speed 1/min : 1075  
C-rod trav.mm : 8.30...8.60

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500  
Del.quantity cm3/ : 39.0...42.0  
1000H.: (36.5...44.5)  
Speed 1/min : 900  
Del.quantity cm3/ : 48.0...50.0  
1000H.: (45.5...52.5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 5,7 Q 17  
Edition : 10.12.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 876 259  
Injection pump  
Pump designation : PES6A90D41ORS2293  
EP type number : 0 410 896 031  
Governor  
Governor design. : RSV350...1400ADC1080  
L  
Governor no. : 0 420 232 408  
Customer-spec. information  
Customer : DAIMLER-BENZ

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000  
Inlet press., bar : 1.00  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
Opening  
pressure, bar : 172...175  
Test inj. tubing : 1 680 750 014  
Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
Prestroke mm : 2.15...2.25  
                  : (2.10...2.30)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + -<sup>o</sup> : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1400  
Contr.-rod trav.mm: 9.70...9.80  
Del.quantity cm3/ : 6.3...6.4  
100H.: (6.1...6.6)  
Dispersion cm3/ : 0.3  
100H.: (0.4)  
2nd speed 1/min: 350.0  
Contr.-rod trav. m: 7.0...7.6  
Del.quantity cm3/ : 1.0...1.2  
100H.: (0.8...1.4)  
Dispersion cm3/ : 0.2  
100H.: (-)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 3.50

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1400  
Del.quantity cm3/ : 63.0...64.0  
1000H.: (61.0...66.0)  
Dispersion cm3/ : 3.00  
1000H.: (4.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 64...72

## Testing:

1st c-rod trav.mm : 8.70  
Speed 1/min : 1440...1445  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1473...1486  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1510...1540  
4th speed 1/min : 1570  
C-rod trav.mm : 0.30...1.40  
5th speed 1/min : 1445...1455  
C-rod trav.mm : 8.70

## LOWEST RATED SPEED I

Control-lever  
position degrees: -3  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 7.50

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 350  
C-rod trav.mm : 7.40...7.60  
C-rod trav.mm : 2.00  
Speed 1/min : 510...570

TORQUE CONTROL  
Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 9.70...9.80  
2nd speed 1/min : 600  
C-rod trav.mm : 9.80...10.00

FUEL-DELIVERY CHARACTERISTICS  
Speed 1/min : 600  
Del.quantity cm3/ : 51.0...53.0  
1000H.: (49.0...55.0)  
Speed 1/min : 850  
Del.quantity cm3/ : 56.0...58.0  
1000H.: (53.5...60.5)

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 5,7 S 8  
 Edition : 09.03.87  
 Superceeded : 1.85  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 265  
 Injection pump  
 Pump designation : PES6A90D410RS2293  
 EP type number : 0 410 896 031  
 Governor  
 Governor design. : RSV350...1400A0C2002  
 L  
 Governor no. : 0 420 232 417

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM 352

1st version kW : 95.6  
 Speed 1/min: 2800

TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.15...2.25  
 : (2.10...2.30)

M03

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - ° : 0.50 (0.75)

BASIC SETTING

1st speed 1/mi: 1380

Contr.-rod trav.mm: 10.00...10.10

Del.quantity cm3/ : 6.1...6.2

100H.: (5.9...6.4)

Dispersion cm3/ : 0.3

100H.: (0.4)

2nd speed 1/min: 350.0

Contr.-rod trav. m: 7.1...7.3

Del.quantity cm3/ : 0.9...1.5

100H.: (0.7...1.7)

Dispersion cm3/ : 0.2

100H.: (0.4)

SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 5.00

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1380

Del.quantity cm3/ : 61.5...62.5

1000H.: (59.5...64.5)

Dispersion cm3/ : 3.00

1000H.: (4.50)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 64...72

Testing:

1st c-rod trav.mm : 9.00

Speed 1/min : 1420...1430

2nd c-rod trav.mm : 4.00

Speed 1/min : 1485...1515

4th speed 1/min : 1600

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 31...39

Setting point w/out aux. spring

Speed 1/min : 350

Contr.-rod trav.mm: 7.2

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 350

C-rod trav.mm : 7.10...7.30

C-rod trav.mm : 2.00

Speed 1/min : 560...620

Speed 1/min : 700

C-rod trav.mm max : 1.00

SET IDLE AUXILIARY SPRING

Contr.-rod trav.mm: 2.00

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 9,6 K 4  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 876 279  
Injection pump  
Pump designation : PES6A95D41ORS2416  
EP type number : 0 410 896 961  
Governor  
Governor design. : RSV325...1100A8C2040  
Governor no. : 0 420 232 288

Customer-spec. information  
Customer : KHD

Engine : BF6L413FRC

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1.75...1.85  
                  : (1.70...1.90)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1100  
-----  
Contr.-rod trav.mm: 10.60...10.70  
-----  
Del.quantity cm3/ : 11.1...11.3  
100H.: (10.9...11.5)  
-----  
Dispersion cm3/ : 0.3  
100H.: (0.6)  
-----  
2nd speed 1/min: 325.0  
Contr.-rod trav. m: 5.4...5.6  
Del.quantity cm3/ : 0.9...1.5  
100H.: (0.6...1.7)  
Dispersion cm3/ : 0.3  
100H.: (0.5)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 17/min: 800  
Cont.-rod travelmm: 0.30...1.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1100  
Charge press. hPa : 500  
Del.quantity cm3/ : 111.5...113.5  
1000H.: (109.5...115.5)  
Dispersion cm3/ : 3.00  
1000H.: (6.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 45...53

## Testing:

1st c-rod trav.mm : 9.60  
Speed 1/min : 1140...1150  
2nd c-rod trav.mm : 3.70  
Speed 1/min : 1165...1195  
4th speed 1/min : 1330  
C-rod trav.mm : 0.30...1.70

## LOWEST RATED SPEED I

Control-lever  
position degrees: 12...20  
Setting point w/out aux. spring  
Speed 1/min : 325

Contr.-rod trav.mm: 5.5

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.00  
Speed 1/min : 325  
C-rod trav.mm : 5.40...5.60  
C-rod trav.mm : 2.00  
Speed 1/min : 440...500  
Speed 1/min : 600  
C-rod trav.mm max : 1.00

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100  
C-rod trav.mm : 10.60...10.70  
2nd speed 1/min : 550  
C-rod trav.mm : 10.60...10.80  
3rd speed 1/min : 375  
C-rod trav.mm : 11.80...12.40

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500  
Pressure hPa : 500  
Contr.-rod trav.mm: 10.60...10.70

Measurement

Speed 1/min : 500

1st pressure hPa : 355  
C-rod trav.mm : 10.30...10.40  
2nd pressure hPa : 245  
C-rod trav.mm : 9.60...9.90  
3rd pressure hPa : -  
C-rod trav.mm : 9.50...9.60

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 500  
Speed 1/min : 900  
Del.quantity cm3/ : 114.0...117.0  
1000H.: (112.0...119.0)  
Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 77.5...80.5  
1000H.: (75.5...82.5)

Remarks:



**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 5,7 V 5  
 Edition : 09.03.87  
 Superceeded : 8.81  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 294  
 Injection pump  
 Pump designation : PES6A90D410RS2596  
 EP type number : 0 410 896 073  
 Governor  
 Governor design. : RSV350...1250AOB1142  
 L  
 Governor no. : 0 420 232 248

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM352A

1st version kW : 110.0  
 Speed 1/min: 2500

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.00...2.10  
 : (1.95...2.15)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
 Tolerance + -<sup>o</sup> : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1250

Contr.-rod trav.mm: 12.30...12.40

Del.quantity cm<sup>3</sup>/ : 7.6...7.7

100H.: (7.4...7.9)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.4)

2nd speed 1/min: 350.0

Contr.-rod trav. m: 9.2...9.4

Del.quantity cm<sup>3</sup>/ : 2.0...2.7

100H.: (1.8...2.9)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.4)

**SLEEVE POSITION**

Control-lever position

Degree: -3

Speed 1/min: 800

Contr.-rod travelmm: 0.30...1.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1250

Charge press. hPa : 700

Del.quantity cm<sup>3</sup>/ : 76.0...77.0

1000H.: (74.0...79.0)

Dispersion cm<sup>3</sup>/ : 3.00

1000H.: (4.50)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 54...62

Testing:

1st c-rod trav.mm : 11.30

Speed 1/min : 1290...1300

2nd c-rod trav.mm : 4.00

Speed 1/min : 1345...1375

3rd c-rod trav.mm : 4.00

Speed 1/min : 1390...1420

4th speed 1/min : 1525

C-rod trav.mm : 0.30...1.70

LOWEST RATED SPEED I

Control-lever  
position degrees: 20...28  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 6.7  
Speed 1/min : 350  
C-rod trav.mm : 9.20...9.40  
C-rod trav.mm : 2.00  
Speed 1/min : 550...610

TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1250  
C-rod trav.mm : 12.30...12.40  
2nd speed 1/min : 500  
C-rod trav.mm : 13.40...13.50  
3rd speed 1/min : 980  
C-rod trav.mm : 12.80...13.00

compensator (LDA,ADA,ALDA)

1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 700  
Contr.-rod trav.mm: 13.40...13.50

Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 11.60...11.70  
2nd pressure hPa : 365  
C-rod trav.mm : 13.10...13.20  
3rd pressure hPa : 190  
C-rod trav.mm : 12.40...12.60

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 700  
Speed 1/min : 750  
Del.quantity cm3/ : 79.0...82.0  
1000H.: (77.0...84.0)  
Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 51.5...53.5  
1000H.: (49.5...55.5)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : SCL 7,4 C 1  
 Edition : 17.12.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 400 876 324  
 Injection pump  
 Pump designation : PES6A95D41ORS2692  
 EP type number : 0 410 896 915  
 Governor  
 Governor design. : RSV325...1100A1C2111  
 L  
 Governor no. : 0 420 232 383

Customer-spec. information  
 Customer : SCHLUETER

Engine : SDM 108 W6  
 1st version kW : 77.0  
 Speed 1/min: 2200

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 000  
 Inlet press., bar : 1.00  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009  
 Opening  
 pressure, bar : 172...175  
 Test inj. tubing : 1 680 750 U14  
 Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x2.00x600  
 (A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 2.70...2.80  
 : (2.65...2.85)

Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4  
 SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 1100  
 -----  
 Contr.-rod trav.mm: 11.60...11.70  
 -----  
 Del.quantity cm3/ : 10.8...11.0  
 -----  
 100H.: (10.6...11.2)  
 -----  
 Dispersion cm3/ : 0.3  
 -----  
 100H.: (0.6)  
 -----  
 2nd speed 1/min: 325.0  
 Contr.-rod trav. m: 7.4...7.6  
 Del.quantity cm3/ : 1.0...1.6  
 100H.: (0.7...1.8)  
 Dispersion cm3/ : 0.3  
 100H.: (0.5)

**SLEEVE POSITION**

Control-lever position  
 Degree: -3  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
 Notch setting x : 4.00

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1100  
 Del.quantity cm3/ : 108.5...110.5  
 1000H.: (106.5...112.5)  
 Dispersion cm3/ : 3.50  
 1000H.: (6.00)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 52...60  
 Testing:  
 1st c-rod trav.mm : 10.60  
 Speed 1/min : 1140...1150  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 1170...1200  
 3rd c-rod trav.mm : 4.00  
 Speed 1/min : 1190...1220  
 4th speed 1/min : 1360

C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever

position degrees: 18...26

Setting point w/out aux. spring

Speed 1/min : 325

Contr.-rod trav.mm: 7.0

#### Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 325

C-rod trav.mm : 7.40...7.60

C-rod trav.mm : 2.00

Speed 1/min : 510...570

#### TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 11.60...11.70

2nd speed 1/min : 500

C-rod trav.mm : 12.90...13.00

3rd speed 1/min : 910

C-rod trav.mm : 12.20...12.40

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm<sup>3</sup>/ : 102.0...105.0

1000H.: (99.5...107.5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 1 G 16  
Edition : 09.03.87  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 876 326  
  
Injection pump  
Pump designation : PES6A85D41ORS2591  
EP type number : 0 410 886 903  
Governor  
Governor design. : RSV325...1150A8C2194  
L  
Governor no. : 0 420 234 435

Customer-spec. information  
Customer : KHD

Engine : BF6L913

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.50...2.60  
                  : (2.45...2.65)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1200  
-----  
Contr.-rod trav.mm: 12.40...12.50  
-----  
Del.quantity cm3/ : 8.4...8.5  
-----  
100H.: (8.2...8.7)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.4)  
-----  
2nd speed 1/min: 325.0  
Contr.-rod trav. m: 7.9...8.1  
Del.quantity cm3/ : 1.0...1.6  
100H.: (0.8...1.8)  
Dispersion cm3/ : 0.2  
100H.: (0.4)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 6.00

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 1200  
Del.quantity cm3/ : 84.0...85.0  
1000H.: (82.0...87.0)  
Dispersion cm3/ : 3.00  
1000H.: (4.50)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 57...65

Testing:  
1st c-rod trav.mm : 11.40  
Speed 1/min : 1240...1250  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1295...1325  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1340...1370  
4th speed 1/min : 1515  
C-rod trav.mm : 0.30...1.40

## LOWEST RATED SPEED I

Control-lever  
position degrees: 17...25  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 7.5

Testing:  
Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 7.40...7.60  
C-rod trav.mm : 2.00  
Speed 1/min : 630...690

TORQUE CONTROL  
Torque-control curve - 1st version  
1st speed 1/min : 1200  
C-rod trav.mm : 12.40...12.50  
2nd speed 1/min : 500  
C-rod trav.mm : 13.50...13.60  
3rd speed 1/min : 925  
C-rod trav.mm : 12.90...13.10

Remarks:  
: DX 7.10

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 6,1 E 2  
Edition : 09.03.87  
Superceeded : 10.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 400 876 330  
  
Injection pump  
Pump designation : PES6A95D41ORS2471  
EP type number : 0 410 896 952  
Governor  
Governor design. : RSV325...1400A2C2205  
L  
Governor no. : 0 420 232 445  
  
Customer-spec. information  
Customer : KHD  
  
Engine : PPM BF6L913C  
  
1st version kW : 125.0  
Speed 1/min: 2800

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
  
Overflow valve : 1 417 413 000  
  
Inlet press., bar : 1.00  
  
Calibrating nozzle-holder  
assembly : 0 681 343 009  
  
Opening  
pressure, bar : 172...175  
  
Test inj. tubing : 1 680 750 014  
  
Outside diameter  
x Wall thickness  
x Length mm : 6.00X2.00X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27  
  
Prestroke mm : 1.90...2.00  
: (1.85...2.05)

M15

Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 1400  
-----  
Contr.-rod trav.mm: 10.90...11.00  
-----  
Del.quantity cm3/ : 8.8...9.0  
-----  
100H.: (8.6...9.2)  
-----  
Dispersion cm3/ : 0.3  
-----  
100H.: (0.6)  
-----  
2nd speed 1/min: 325.0  
Contr.-rod trav. m: 7.5...7.7  
Del.quantity cm3/ : 1.0...1.6  
100H.: (0.7...1.8)  
Dispersion cm3/ : 0.3  
100H.: (0.5)

## SLEEVE POSITION

Control-lever position  
Degree: -3  
Speed 1/min: 800  
Cont.-rod travelmm: 0.30...0.70

Governor-spring reload  
Notch setting x : 4.00

## FULL-LOAD DELIV. AT FULL-LOAD STGP

1st version  
Speed 1/min: 1400  
Charge press. hPa : 700  
Del.quantity cm3/ : 88.0...90.0  
1000H.: (86.0...92.0)  
Dispersion cm3/ : 3.50  
1000H.: (6.00)

## HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 54...62

Testing:  
1st c-rod trav.mm : 9.90  
Speed 1/min : 1440...1450  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1490...1520  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1545...1575

4th speed 1/min : 1675  
C-rod trav.mm : 0.30...1.40

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 18...26  
Setting point w/out aux. spring  
Speed 1/min : 325  
Contr.-rod trav.mm: 7.1

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 325  
C-rod trav.mm : 7.50...7.70  
C-rod trav.mm : 2.00  
Speed 1/min : 625...685

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1400  
C-rod trav.mm : 10.90...11.00  
2nd speed 1/min : 500  
C-rod trav.mm : 10.90...11.10

compensator (LDA,ADA,ALDA)

#### 1st version

Setting  
Speed 1/min : 650  
Pressure hPa : 700  
Contr.-rod trav.mm: 10.90...11.10

#### Measurement

Speed 1/min : 650  
1st pressure hPa : -  
C-rod trav.mm : 10.20...10.30  
2nd pressure hPa : 220  
C-rod trav.mm : 10.70...10.80  
3rd pressure hPa : 180  
C-rod trav.mm : 10.50...10.60

#### FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : 700  
Speed 1/min : 850  
Del. quantity cm3/ : 79.5...82.5  
1000H.: (77.0...85.0)  
Charge press. hPa : -  
Speed 1/min : 650  
Del. quantity cm3/ : 64.0...66.0  
1000H.: (62.0...68.0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 6,0 C 4  
Edition : 28.11.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 400 876 334  
Injection pump  
Pump designation : PES6A90D410RS2710-1  
EP type number : 0 410 896 084  
Governor  
Governor design. : RSV350...750A0C2006-3L  
Governor no. : 0 420 232 454

Customer-spec. information  
Customer : DAIMLER-BENZ

Engine : OM 366

1st version kW : 54.0

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.25...2.35  
: (2.20...2.40)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

## BASIC SETTING

1st speed 1/mi: 700

Contr.-rod trav.mm: 12.20...12.30

Del.quantity cm<sup>3</sup>/ : 6.4...6.5

100H.: (6.2...6.7)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.5)

2nd speed 1/min: 350.0

Contr.-rod trav. m: 8.2...8.4

Del.quantity cm<sup>3</sup>/ : 0.6...1.2

100H.: (0.4...1.4)

Dispersion cm<sup>3</sup>/ : 0.2

100H.: (0.4)

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 700

Del.quantity cm<sup>3</sup>/ : 64.0...65.0

1000H.: (62.0...67.0)

Dispersion cm<sup>3</sup>/ : 3.00

1000H.: (5.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 78...86

Testing:

1st c-rod trav.mm : 11.20

Speed 1/min : 750...755

2nd c-rod trav.mm : 4.00

Speed 1/min : 775...788

4th speed 1/min : 900

C-rod trav.mm : 0.30...1.40

## LOWEST RATED SPEED I

Control-lever

position degrees: 66...74

Setting point w/out aux. spring

Speed 1/min : 350

Contr.-rod trav.mm: 8.3

Testing:

Speed 1/min : 100

C-rod trav.mm min : 19.50

Speed 1/min : 350  
C-rod trav.mm : 8.20...8.40  
C-rod trav.mm : 2.00  
Speed 1/min : 380...420

SET IDLE AUXILIARY SPRING  
Contr.-rod trav.mm: 2.00

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : HAN 10,8 F5  
Edition : 17.12.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 401 076 007  
Injection pump  
Pump designation : PE6A100D32ORS3030-1  
EP type number : 0 411 006 019  
Governor  
Governor design. : RSV350...1100ABC2217  
R  
Governor no. : 0 420 232 462

Customer-spec. information  
Customer : HANOMAG

Engine : D964T

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42  
Overflow valve : 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 003

Outside diameter  
x Wall thickness  
x Length mm : 6.00x2.00x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 1.80...1.90  
: (1.75...1.95)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing°CS: 0-60-120-180-240-300  
Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 1

## START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 8.50...9.50  
Difference ° CS : 5.50...6.50

## BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 10.20...10.30

Del.quantity cm3/ : 12.6...12.8

100H.: (12.4...13.0)

Dispersion cm3/ : 0.3

100H.: (0.6)

2nd speed 1/min: 350.0

Contr.-rod trav. m: 6.6...6.8

Del.quantity cm3/ : 1.5...2.1

100H.: (1.2...2.3)

Dispersion cm3/ : 0.3

100H.: (0.5)

## SLEEVE POSITION

Control-lever position

Degree: -3

Speed 1/min: 800

Cont.-rod travelmm: 0.30...0.70

Governor-spring reload

Notch setting x : 5.80

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 126.0...128.0

1000H.: (124.0...130.0)

Dispersion cm3/ : 3.50

1000H.: (6.00)

## HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 53...61

Testing:

1st c-rod trav.mm : 9.20

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4.00

Speed 1/min : 1175...1205  
3rd c-rod trav.mm : 4.00  
Speed 1/min : 1210...1240

#### LOWEST RATED SPEED I

Control-lever  
position degrees: 22...30  
Setting point w/out aux. spring  
Speed 1/min : 350  
Contr.-rod trav.mm: 6.2

#### Testing:

Speed 1/min : 100  
C-rod trav.mm min : 19.50  
Speed 1/min : 350  
C-rod trav.mm : 6.60...6.80  
C-rod trav.mm : 2.00  
Speed 1/min : 500...560

#### TORQUE CONTROL

Torque-control curve - 1st version  
1st speed 1/min : 1100  
C-rod trav.mm : 10.20...10.30  
2nd speed 1/min : 500  
C-rod trav.mm : 11.10...11.20  
4th speed 1/min : 940  
C-rod trav.mm : 10.50...10.70

#### FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750  
Del.quantity cm3/ : 140.0...143.0  
1000H.: (137.5...145.5)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DEE 6,6 B  
 Edition : 7.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 401 276 017  
 Injection pump  
 Pump designation : PES6A100D410RS3020  
 Governor  
 Governor design. : RSV400...1100A2B660D  
 L

Customer-spec. information  
 Customer : JOHN DEERE

Engine : 6404 A

## TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42  
 Inlet press., bar : 1.5  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Test inj. tubing : 9 680 750 014

Outside diameter  
 x Wall thickness  
 x Length mm : 6,00x2,00x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

## START OF DELIVERY

Prestroke mm : 2,0...2,1  
 : (1,95...2,15)  
 Cam sequence : 1-5-3-6-2-4

SD ang. spacing°CS: 0-60-120-180-240-300  
 Tolerance + - : 0,5 (0,75)

SD mark cyl. no. : 1

# BASIC SETTING

1st speed 1/mi: 1100  
 -----  
 Contr.-rod trav.mm: 10,0  
 -----  
 Del.quantity cm3/ : 10,4...10,6  
 -----  
 Dispersion cm3/ : 0,30  
 -----

2nd speed 1/min: 400  
 Contr.-rod trav. m: 6,3  
 Del.quantity cm3/ : 1,2...1,6  
 Dispersion cm3/ : 0,30

## SLEEVE POSITION

Control-lever position  
 Degree: LOSE  
 Speed 1/min: 800  
 Cont.-rod travelmm: 0,7...1,0

Governor-spring reload  
 Notch setting x : -

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
 Speed 1/min: 1100  
 Del.quantity cm3/ : 104,0...106,0  
 1000H.: (102,0...108,0)

## HIGHEST RATED SPEED

1st version  
 Control-lever  
 position degrees: 40...48

## Testing:

1st c-rod trav.mm : 9,00  
 Speed 1/min : 1145...1155  
 2nd c-rod trav.mm : 4,8  
 Speed 1/min : 1200  
 4th speed 1/min : 1350  
 C-rod trav.mm : 0,3...1,7

## LOWEST RATED SPEED I

Control-lever  
 position degrees: 17...25  
 Setting point w/out aux. spring  
 Speed 1/min : 400  
 Contr.-rod trav.mm: 5,8  
 Speed 1/min : 480  
 C-rod trav.mm : 2,0...4,0  
 C-rod trav.mm : 6,3  
 Speed 1/min : 400  
 Speed 1/min : 600  
 C-rod trav.mm max : 1,0

## TORQUE CONTROL

Torque-control curve - 1st version  
 1st speed 1/min : 1100

C-rod trav.mm : 10,0  
2nd speed 1/min : 750  
C-rod trav.mm : 10,5

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 550

Pressure hPa : 900

Contr.-rod trav.mm: -

Measurement

Speed 1/min : 550

1st pressure hPa : 490

C-rod trav.mm : -

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750

Del.quantity cm<sup>3</sup>/ : 113,0...116,0

1000h.: (110,0...119,0)

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : GUS 31,8 A3  
 Edition : 19.12.86  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 401 830 709  
 Injection pump  
 Pump designation : PE12P130A12ORS3094-2  
 EP type number : 0 411 830 705  
 Governor  
 Governor design. : RQV350...900PA749  
 Governor no. : 0 421 813 480

Customer-spec. information  
 Customer : GUASCOR

Engine : E318

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
 assembly : 1 688 901 019

Opening  
 pressure, bar : 207...210

Perforated-plate  
 diameter mm : 0,8

Test inj. tubing : 1 680 750 074

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x1.50x1000

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27  
 Prestroke mm : 3.60...3.70  
 : (3.55...3.75)  
 Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 12- 9- 4- 5- 8  
 - 11- 2- 3- 10- 7- 6

SD ang. spacing°CS: 0-45-60-105-120-165-  
 180-225-240-285-300-  
 345  
 Tolerance + - ° : 0.50 (0.75)

**BASIC SETTING**

1st speed 1/mi: 900  
 -----  
 Contr.-rod trav.mm: 8.50...8.60  
 -----  
 Del.quantity cm3/ : 18.8...19.1  
 -----  
 100H.: (18.4...19.4)  
 -----  
 Dispersion cm3/ : 0.6  
 -----  
 100H.: (1.0)  
 -----  
 2nd speed 1/min: 350.0  
 Contr.-rod trav. m: 4.0...4.2  
 Del.quantity cm3/ : 2.1...2.7  
 100H.: (1.7...3.1)  
 Dispersion cm3/ : 1.0  
 100H.: (1.4)

(B) Setting of injection pump with  
 externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 350  
 Sleeve travel mm: 1.50...1.80  
 2nd speed 1/min: 750  
 Sleeve travel mm: 5.40...5.60  
 3rd speed 1/min: 900  
 Sleeve travel mm: 7.60...7.80

**SLEEVE POSITION**

Speed 1/min: 940  
 Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 900  
 Del.quantity cm3/ : 188.0...191.0  
 1000H.: (184.5...194.5)  
 Dispersion cm3/ : 6.00  
 1000H.: (10.00)

**HIGHEST RATED SPEED**

1st version  
 Control-lever  
 position degrees: 61...69

Testing:

1st c-rod trav.mm : 7.50  
Speed 1/min : 940...950  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 970...1000  
4th speed 1/min : 1100  
C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I

Control-lever  
position degrees: 6...14

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 5.60  
Speed 1/min : 350  
C-rod trav.mm : 4.00...4.20

CONSTANT REGULATION

Speed 1/min : 355...455

Remarks:



BOSCH INJ. PUMP TEST SPECIFICATIONS

- 4- 11- 10- 2- 6- 7

Note inst. in remarks column

Test sheet : MB 19,1 I  
 Edition : 09.03.87  
 Superceeded : 7.83  
 Calibrating oil : ISO-4113  
 Combination no. : 0 401 840 050  
 Injection pump  
 Pump designation : PE12P110A320LS830  
 EP type number : 0 411 810 030  
 Governor  
 Governor design. : RQ1150PA310R  
 Governer no. : 0 421 801 071

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM404A

1st version kW : 386.0  
 Speed 1/min: 2300

TEST BENCH REQUIREMENTS

Calibrating-oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Overflow quantity min. 1/h: 150...170

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening pressure, bar : 172...175

Outside diameter  
 x Wall thickness  
 x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

START OF DELIVERY

Prestroke mm : 3.20...3.30  
 : (3.15...3.35)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 12- 1- 5- 9- 8- 3

M25

SD ang. spacing°CS: 0-45-60-105-120-165-  
 180-225-240-285-300-  
 345

Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 12

BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 12.95...13.00

Del.quantity cm3/ : 14.0...14.2

100H.: (13.7...14.4)

Dispersion cm3/ : 0.4

100H.: (0.7)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 7.4...7.6

Del.quantity cm3/ : 1.4...2.0

100H.: (1.1...2.2)

Dispersion cm3/ : 0.4

100H.: (-)

(B) Setting of injection pump with  
 externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 1080

Sleeve travel mm: 2.20...2.40

2nd speed 1/min: 1160

Sleeve travel mm: 5.70...5.90

3rd speed 1/min: 1240

Sleeve travel mm: 8.50...8.70

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Del.quantity cm3/ : 140.0...142.0

1000H.: (137.5...144.5)

Dispersion cm3/ : 4.00

1000H.: (7.50)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 27...35

Testing:

1st c-rod trav.mm : 11.90

Speed 1/min : 1160...1165

2nd c-rod trav.mm : 5.90  
Speed 1/min : 1205...1215  
4th speed 1/min : 1300  
C-rod trav.mm : 0.00...1.00

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : MB 19,1 D 2  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 401 840 059  
 Injection pump  
 Pump designation : PE12P110A320LS830  
 EP type number : 0 411 810 036  
 Governor  
 Governor design. : RQ1050PA3745  
 Governor no. : 0 421 801 059

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM404A  
 1st version kW : 336.0

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 025  
 Inlet press., bar : 1.50  
 Calibrating nozzle-holder  
 assembly : 0 681 343 009  
 Opening  
 pressure, bar : 172...175  
 Outside diameter  
 x Wall thickness  
 x Length mm : 6.00X1.50X600

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Prestroke mm : 3.20...3.30  
 : (3.15...3.35)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 12- 1- 5- 9- 8- 3  
 Cam sequence : - 4- 11- 10- 2- 6- 7

SD ang. spacing°CS: 0-45-60-105-120-165-  
 180-225-240-285-300-  
 345  
 Tolerance + - ° : 0.50 (0.75)  
 SD mark cyl. no. : 12

**BASIC SETTING**

1st speed 1/mi: 1000  
 -----  
 Contr.-rod trav.mm: 12.90...13.00  
 -----  
 Del.quantity cm3/ : 14.0...14.2  
 -----  
 100H.: (13.7...14.4)  
 -----  
 Dispersion cm3/ : 0.4  
 -----  
 100H.: (0.7)  
 -----  
 2nd speed 1/min: 300.0  
 Contr.-rod trav. m: 7.3...7.5  
 Del.quantity cm3/ : 1.4...2.0  
 100H.: (1.1...2.2)  
 Dispersion cm3/ : 0.4  
 100H.: (-)

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 1000  
 Del.quantity cm3/ : 140.0...142.0  
 1000H.: (137.5...144.5)  
 Dispersion cm3/ : 4.00  
 1000H.: (7.50)

**HIGHEST RATED SPEED**

Testing:  
 1st c-rod trav.mm : 11.90  
 Speed 1/min : 1055...1060  
 2nd c-rod trav.mm : 6.00  
 Speed 1/min : 1095...1105  
 4th speed 1/min : 1200  
 C-rod trav.mm : 0.00...1.00

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 19,1 D 3  
 Edition : 09.03.87  
 Superceeded : -  
 Calibrating oil : ISO-4113  
 Combination no. : 0 401 840 063  
 Injection pump  
 Pump designation : PE12P110A320LS830Z  
 EP type number : 0 411 810 033  
 Governor  
 Governor design. : RQ900PA310R  
 Governor no. : 0 421 801 059

Customer-spec. information  
 Customer : DAIMLER-BENZ

Engine : OM404A

1st version kW : 368.0

TEST BENCH REQUIREMENTS

Calibrating oil  
 inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Overflow  
 quantity min. 1/h: 150...170

Calibrating nozzle-holder  
 assembly : 0 681 343 009

Opening  
 pressure, bar : 172...175

Outside diameter  
 x Wall thickness : 6.00X1.50X600  
 x Length mm

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

START OF DELIVERY

Prestroke mm : 3.20...3.30  
 : (3.15...3.35)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 12- 1- 5- 9- 8- 3  
 - 4- 11- 10- 2- 6- 7

C-rod trav.mm : 0.00...1.00

SD ang. spacing<sup>o</sup>CS: 0-45-60-105-120-165-  
180-225-240-285-300-  
345  
Tolerance + - <sup>o</sup> : 0.50 (0.75)

Remarks:

SD mark cyl. no. : 12

#### BASIC SETTING

1st speed 1/mi: 850  
-----  
Contr.-rod trav.mm: 14.10...14.20  
-----  
Del.quantity cm<sup>3</sup>/ : 15.9...16.1  
-----  
100H.: (15.6...16.3)  
-----  
Dispersion cm<sup>3</sup>/ : 0.4  
-----  
100H.: (0.7)  
-----  
2nd speed 1/min: 300.0  
Contr.-rod trav. m: 7.6...7.8  
Del.quantity cm<sup>3</sup>/ : 1.4...2.0  
100H.: (1.1...2.2)  
Dispersion cm<sup>3</sup>/ : 0.4  
100H.: (-)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 840  
Sieve travel mm: 2.10...2.30  
2nd speed 1/min: 900  
Sieve travel mm: 5.20...5.40  
3rd speed 1/min: 960  
Sieve travel mm: 9.20...9.40

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version  
Speed 1/min: 850  
Del.quantity cm<sup>3</sup>/ : 159.0...161.0  
1000H.: (156.5...163.5)  
Dispersion cm<sup>3</sup>/ : 4.00  
1000H.: (7.50)

#### HIGHEST RATED SPEED

Testing:  
1st c-rod trav.mm : 13.10  
Speed 1/min : 905...910  
2nd c-rod trav.mm : 5.90  
Speed 1/min : 940...950  
4th speed 1/min : 1050

NO1

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 19,1 I 1  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 401 840 069  
Injection pump  
Pump designation : PE12P110A32OLS830  
EP type number : 0 411 810 030  
Governor  
Governor design. : RQ1050PA310  
Governor no. : 0 421 801 108

Customer-spec. information  
Customer : DAIMLER-BENZ

Engine : OM404A

1st version kW : 407.0  
Speed 1/min: 2100

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Prestroke mm : 3.20...3.30  
                  : (3.15...3.35)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 12- 1- 5- 9- 8- 3  
                  - 4- 11- 10- 2- 6- 7

SD ang. spacing°CS: 0-45-60-105-120-165-  
  180-225-240-285-300-  
  345  
Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 12

## BASIC SETTING

1st speed 1/mi: 1000

Contr.-rod trav.mm: 13.70...13.80

Del.quantity cm3/ : 15.5...15.7

100H.: (15.2...15.9)

Dispersion cm3/ : 0.4

100H.: (0.7)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 7.3...7.5

Del.quantity cm3/ : 1.4...2.0

100H.: (1.1...2.2)

Dispersion cm3/ : 0.4

100H.: (-)

## FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1000

Del.quantity cm3/ : 155.0...157.0

1000H.: (152.5...159.5)

Dispersion cm3/ : 4.00

1000H.: (7.50)

## HIGHEST RATED SPEED

Testing:

1st c-rod trav.mm : 12.70

Speed 1/min : 1055...1060

2nd c-rod trav.mm : 5.90

Speed 1/min : 1095...1105

4th speed 1/min : 1200

C-rod trav.mm : 0.00...1.00

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : FIA 25,7 A  
Edition : 09.03.87  
Superceeded : 10.82  
Calibrating oil : ISO-4113

Combination no. : 0 401 840 701

Injection pump  
Pump designation : PE12P120A92OLS3809  
EP type number : 0 411 820 700  
Governor  
Governor design. : RQV300...950PA537  
Governor no. : 0 421 813 263

Customer-spec. information  
Customer : IVECO-FIAT

Engine : 8297.22

1st version kW : 480.0  
Speed 1/min: 1900

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 1 688 901 019

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x1000

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27

Prestroke mm : 3.50...3.60  
                  : (3.45...3.65)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 4- 9- 8- 5- 2-  
                  11- 10- 3- 6- 7- 12

SD ang. spacing<sup>o</sup>CS: 0-15-60-75-120-135-  
                          180-195-240-255-300-  
SD ang. spacing<sup>o</sup>CS: 315  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 12

#### BASIC SETTING

1st speed 1/mi: 950

Contr.-rod trav.mm: 10.80...10.90

Del.quantity cm<sup>3</sup>/ : 19.1...19.3

100H.: (18.8...19.6)

Dispersion cm<sup>3</sup>/ : 0.5

100H.: (0.9)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 5.0...5.2

Del.quantity cm<sup>3</sup>/ : 2.1...2.7

100H.: (1.8...3.0)

Dispersion cm<sup>3</sup>/ : 0.8

100H.: (1.2)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 300

Sleeve travel mm: 1.40...1.60

2nd speed 1/min: 450

Sleeve travel mm: 3.50...3.90

3rd speed 1/min: 800

Sleeve travel mm: 5.90...6.30

4th speed 1/min: 950

Sleeve travel mm: 7.10...7.30

#### SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1110

Cont.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 950

Charge press. hPa : 700

NOS

Del.quantity cm<sup>3</sup>/ : 191.0...193.0  
1000H.: (188.0...196.0)  
Dispersion cm<sup>3</sup>/ : 5.00  
1000H.: (9.00)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 52...60

Testing:

1st c-rod trav.mm : 9.80

Speed 1/min : 990...1000

2nd c-rod trav.mm : 4.00

Speed 1/min : 1105...1135

4th speed 1/min : 1250

C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever

position degrees: 7...15

Testing:

Speed 1/min : 100

C-rod trav.mm min : 6.60

Speed 1/min : 300

C-rod trav.mm : 5.00...5.20

#### CONSTANT REGULATION

Speed 1/min : 320...425

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 700

Contr.-rod trav.mm: 10.80...10.90

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 7.70...7.90

2nd pressure hPa : 260

C-rod trav.mm : 9.70...9.80

3rd pressure hPa : 200

C-rod trav.mm : 8.30...8.70

#### FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : -

Speed 1/min : 950

Del.quantity cm<sup>3</sup>/ : 129.0...131.0

1000H.: (126.0...134.0)

Remarks:



# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 21,9 B 4  
Edition : 12.09.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 401 840 732  
Injection pump  
Pump designation : PE12P120A32OLS3819-  
14  
EP type number : 0 411 820 716  
Governor  
Governor design. : RQV350...1150PA493-6  
Governor no. : 0 421 813 523

Customer-spec. information  
Customer : DAIMLER-BENZ

Engine : OM 424 LA

1st version kW : 452.0  
Speed 1/min: 2300

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Overflow  
quantity min. 1/h: 150...160

Calibrating nozzle-holder  
assembly : 1 688 901 019

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x1000

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 4.00...4.10  
                  : (3.95...4.15)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 12- 1- 5- 9- 8- 3-  
                  4- 11- 10- 2- 6- 7

SD ang. spacing<sup>o</sup>CS: 0-45-60-105-120-165-  
                          180-225-240-285-300-  
                          345

Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 12

BASIC SETTING

1st speed 1/mi: 1150

Contr.-rod trav.mm: 12.10...12.20

Del.quantity cm3/ : 18.0...18.2  
                  100H.: (17.7...18.5)

Dispersion cm3/ : 0.5  
                  100H.: (0.9)

2nd speed 1/min: 350.0  
Contr.-rod trav. m: 4.8...5.0  
Del.quantity cm3/ : 1.6...2.2  
                  100H.: (1.3...2.5)  
Dispersion cm3/ : 0.8  
                  100H.: (1.2)

(B) Setting of injection pump with  
externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 350  
Sleeve travel mm: 2.20...2.30  
2nd speed 1/min: 510  
Sleeve travel mm: 3.20...3.50  
3rd speed 1/min: 1150  
Sleeve travel mm: 7.50...8.80  
4th speed 1/min: 1200  
Sleeve travel mm: 8.90...9.10

SLEEVE POSITION

Control-lever position  
Degree: -1  
Speed 1/min: 1180  
Cont.-rod travelmm: 15.20...17.80

FULL-LOAD DELIV. AT FULL-LOAD STOP

NO8

1st version

Speed 1/min: 1150  
Charge press. hPa : 700  
Del.quantity cm3/ : 180.0...182.0  
                  1000H.: (177.0...185.0)  
Dispersion cm3/ : 5.00  
                  1000H.: (9.00)

HIGHEST RATED SPEED

1st version  
Control-lever  
position degrees: 61...69

Testing:

1st c-rod trav.mm : 11.10  
Speed 1/min : 1190...1200  
2nd c-rod trav.mm : 4.00  
Speed 1/min : 1235...1265  
4th speed 1/min : 1350  
C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I

Control-lever  
position degrees: 8...16

Testing:

Speed 1/min : 100  
C-rod trav.mm min : 6.20  
Speed 1/min : 350  
C-rod trav.mm : 4.50...4.70

CONSTANT REGULATION

Speed 1/min : 400...600

compensator (LDA,ADA,ALDA)

1st version

Setting  
Speed 1/min : 500  
Pressure hPa : 700  
Contr.-rod trav.mm: 12.10...12.20

Measurement

Speed 1/min : 500  
1st pressure hPa : -  
C-rod trav.mm : 10.10...10.30  
2nd pressure hPa : 540  
C-rod trav.mm : 11.40...11.50  
3rd pressure hPa : 470  
C-rod trav.mm : 10.60...10.80

SWITCH-OVER POINT

Speed 1/min : 270 (290)

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 700  
Speed 1/min : 650  
Del.quantity cm3/ : 179.0...185.0  
1000H.: (176.0...188.0)  
Dispersion cm3/ : 8.00  
1000H.: (12.0)  
Charge press. hPa : 700  
Speed 1/min : 1150  
Del.quantity cm3/ : 134.0...138.0  
1000H.: (131.0...141.0)  
Dispersion cm3/ : 8.00  
1000H.: (12.0)  
Charge press. hPa : -  
Speed 1/min : 500  
Del.quantity cm3/ : 131.0...133.0  
1000H.: (128.0...136.0)  
Dispersion cm3/ : 8.00  
1000H.: (12.0)

Remarks:

## BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : KHD 19.2 A  
Edition : 09.03.87  
Superceeded : -  
Calibrating oil : ISO-4113  
  
Combination no. : 0 401 840 734  
  
Injection pump  
Pump designation : PE12P110A920LS3173  
EP type number : 0 411 810 708  
Governor  
Governor design. : RQV300...107SPA746  
Governor no. : 0 421 813 477

Customer-spec. information  
Customer : KHD

Engine : BF12L513

1st version kW : 333.0  
Speed 1/min: 2150

### TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00X1.50X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

### START OF DELIVERY

Prestroke mm : 2.80...2.90  
: (2.75...2.95)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 4- 9- 8- 5- 2-

11- 10- 3- 6- 7- 12

SD ang. spacing<sup>0</sup> : 0-15-60-75-120-135-180-195-240-255-300-315

Tolerance + - ° : 0.50 (0.75)

SD mark cyl. no. : 1

BASIC SETTING

1st speed 1/mi: 1075

Contr.-rod trav.mm: 11.90...12.00

Del.quantity cm3/ : 14.8...15.2

100H.: (14.6...15.4)

Dispersion cm3/ : 0.5

100H.: (0.8)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 6.6...6.8

Del.quantity cm3/ : 1.5...2.1

100H.: (1.2...2.3)

Dispersion cm3/ : 0.7

100H.: (1.0)

(B) Setting of injection pump with externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 300

Sleeve travel mm: 1.30...1.40

2nd speed 1/min: 380

Sleeve travel mm: 2.30...2.70

3rd speed 1/min: 430

Sleeve travel mm: 2.80...3.30

4th speed 1/min: 700

Sleeve travel mm: 5.30...5.60

5th speed 1/min: 1120

Sleeve travel mm: 8.40...8.60

SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1120

Cont.-rod travelmm: 15.20...17.80

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1075

Charge press. hPa : 750

Del.quantity cm3/ : 148.0...152.0

1000H.: (146.0...154.0)

Dispersion cm3/ : 5.00  
1000H.: (8.00)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 50...58

Testing:

1st c-rod trav.mm : 10.90

Speed 1/min : 1115...1125

2nd c-rod trav.mm : 4.00

Speed 1/min : 1215...1245

4th speed 1/min : 1350

C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I

Control-lever

position degrees: 15...23

Testing:

Speed 1/min : 100

C-rod trav.mm min : 8.10

Speed 1/min : 300

C-rod trav.mm : 6.60...6.80

CONSTANT REGULATION

Speed 1/min : 315...465

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 450

Pressure hPa : 750

Contr.-rod trav.mm: 12.20...12.30

Measurement

Speed 1/min : 450

1st pressure hPa : -

C-rod trav.mm : 10.70...10.80

2nd pressure hPa : 410

C-rod trav.mm : 11.60...11.70

3rd pressure hPa : 350

C-rod trav.mm : 11.00...11.20

SWITCH-OVER POINT

Speed 1/min : 220 (240)

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 750

Speed 1/min : 650

Del.quantity cm3/ : 152.0...156.0

1000H.: (149.0...159.0)

Charge press. hPa : -

Speed 1/min : 450

Del. quantity cm<sup>3</sup>/ : 118.0...122.0  
1000H.: (115.0...125.0)

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 11,8 F  
Edition : 09.03.87  
Superceeded : 10.83  
Calibrating oil : ISO-4113

Combination no. : 0 401 846 398

Injection pump  
Pump designation : PE6P110A720RS371  
EP type number : 0 411 816 123  
Governor  
Governor design. : RQ300/1100PA424R  
Governor no. : 0 421 801 086

Customer-spec. information  
Customer : DAIMLER-BENZ

Engine : OM355A

1st version kW : 206.0  
Speed 1/min: 2200

TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Overflow  
quantity min. 1/h: 100...120

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter  
x Wall thickness  
x Length mm : 6.00X1.50X600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27

Prestroke mm : 2.80...2.90  
                  : (2.75...2.95)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 11.70...11.80

Del.quantity cm<sup>3</sup>/ : 16.0...16.2

100H.: (15.7...16.4)

Dispersion cm<sup>3</sup>/ : 0.4

100H.: (0.8)

2nd speed 1/min: 300.0

Contr.-rod trav. m: 5.9...6.1

Del.quantity cm<sup>3</sup>/ : 1.4...2.0

100H.: (1.1...2.2)

Dispersion cm<sup>3</sup>/ : 0.4

100H.: (0.7)

#### SLEEVE POSITION

Control-lever position

Degree: -2

Speed 1/min: 650

Cont.-rod travelmm: 19.20...20.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 700

Del.quantity cm<sup>3</sup>/ : 160.0...162.0

1000H.: (157.5...164.5)

Dispersion cm<sup>3</sup>/ : 4.00

1000H.: (8.00)

#### HIGHEST RATED SPEED

Setting point:

Speed 1/min : 650

Contr.-rod trav.mm: 20.0

Testing:

1st c-rod trav.mm : 10.70

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4.00

Speed 1/min : 1190...1220

4th speed 1/min : 1350  
C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Setting point w/out aux. spring

Speed 1/min : 300

Contr.-rod trav.mm: 6.2

Testing:

Speed 1/min : 100

C-rod trav.mm min : 8.20

Speed 1/min : 300

C-rod trav.mm : 6.10...6.30

C-rod trav.mm : 2.00

Speed 1/min : 410...450

#### TORQUE CONTROL

Dimension a mm : -

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 11.70...11.80

2nd speed 1/min : 650

C-rod trav.mm : 11.70...11.90

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 700

Contr.-rod trav.mm: 11.70...11.80

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 11.00...11.10

2nd pressure hPa : 390

C-rod trav.mm : 11.50...11.60

3rd pressure hPa : 350

C-rod trav.mm : 11.20...11.30

#### SWITCH-OVER POINT

Speed 1/min : 220 (240)

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 700

Speed 1/min : 600

Del.quantity cm<sup>3</sup>/ : 156.0...160.0

1000H.: (153.0...163.0)

Dispersion cm<sup>3</sup>/ : 6.00

1000H.: (9.00)

Charge press. hPa : -

Speed 1/min : 500

Del.quantity cm<sup>3</sup>/ : 135.0...137.0

1000H.: (132.0...140.0)



Dispersion cm<sup>3</sup>/ : 6.00  
1000H.: (9.00)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : PEN 7,0 K 1  
Edition : 12.09.86  
Superceeded : -  
Calibrating oil : ISO-4113  
Combination no. : 0 401 846 455  
Injection pump  
Pump designation : PE6P110A32ORS367Y  
EP type number : 0 411 816 132  
Governor  
Governor design. : RQV250...1000PA394  
Governor no. : 0 421 813 241

Customer-spec. information  
Customer : VOLVO-PENTA

Engine : TMD 70 C

1st version kW : 154.5  
Speed 1/min: 2000

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 0 681 343 009

Opening  
pressure, bar : 172...175

Test inj. tubing : 1 680 750 004

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x600

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

## START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 3.00...3.10  
: (2.95...3.15)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 900

Contr.-rod trav.mm: ?

Del.quantity cm<sup>3</sup>/ : 8.5...8.7

100H.: (8.2...9.0)

Dispersion cm<sup>3</sup>/ : 0.4

100H.: (0.8)

2nd speed 1/min: 250.0

Contr.-rod trav. m: 4.9...5.1

Del.quantity cm<sup>3</sup>/ : 1.6...2.0

100H.: (1.3...2.2)

Dispersion cm<sup>3</sup>/ : 0.3

100H.: (0.6)

#### SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1050

Contr.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 900

Charge press. hPa : 700

Del.quantity cm<sup>3</sup>/ : 85.0...87.0

1000H.: (82.0...90.0)

Dispersion cm<sup>3</sup>/ : 4.00

1000H.: (8.00)

#### HIGHEST RATED SPEED

Setting point:

Speed 1/min : 1050

Contr.-rod trav.mm: 16.5

Testing:

1st c-rod trav.mm : ?

Speed 1/min : 1050...1060

2nd c-rod trav.mm : 4.00

Speed 1/min : 1130...1150

4th speed 1/min : 1250

C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever

position degrees: 8...16

Testing:

Speed 1/min : 100

C-rod trav.mm min : 6.50

Speed 1/min : 250

C-rod trav.mm : 4.70...4.80

Remarks:

**BOSCH INJ. PUMP TEST SPECIFICATIONS**

Note inst. in remarks column

Test sheet : RVI 8,8 A  
 Edition : 12.09.86  
 Superceeded : 4.81  
 Calibrating oil : ISO-4113  
 Combination no. : 0 401 846 460  
 Injection pump  
 Pump designation : PE6P120A32ORS436  
 EP type number : 0 411 826 118  
 Governor  
 Governor design. : RQ750PA595  
 Governer no. : 0 421 801 148

Customer-spec. information  
 Customer : RVI

Engine : MID (S) 062030

**TEST BENCH REQUIREMENTS**

Calibrating-oil  
 inlet temp. °C : 38...42  
 Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
 assembly : 0 681 443 022

Opening  
 pressure, bar : 172...175

Test inj. tubing : 1 680 750 060

Outside diameter  
 x Wall thickness  
 x Length mm : 8.00x2.00x1000

(A) Injection pump setting values  
 Insp. values in parentheses  
 Set constant delivery quant.  
 per values -----

**START OF DELIVERY**

Test pressure, bar: 25...27

Prestroke mm : 2.80...2.90  
 : (2.75...2.95)  
 Contr.-rod trav.mm: 9.00...12.00  
 Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300  
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

**START OF DELIVERY DIFFERENCE**

betw.c-rod trav.mm: 10.00...11.00

**BASIC SETTING**

1st speed 1/mi: 700  
 -----  
 Contr.-rod trav.mm: 10.00...10.10  
 -----  
 Del.quantity cm<sup>3</sup>/ : 17.2...17.6  
 -----  
 100H.: (16.9...17.9)  
 -----  
 Dispersion cm<sup>3</sup>/ : 0.5  
 -----  
 100H.: (0.9)  
 -----

2nd speed 1/min: 250.0  
 Contr.-rod trav. m: 5.4...5.6  
 Del.quantity cm<sup>3</sup>/ : 1.5...2.1  
 100H.: (1.2...2.4)  
 Dispersion cm<sup>3</sup>/ : 0.8  
 100H.: (1.2)

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version  
 Speed 1/min: 700  
 Del.quantity cm<sup>3</sup>/ : 172.0...176.0  
 1000H.: (169.0...179.0)  
 Dispersion cm<sup>3</sup>/ : 5.00  
 1000H.: (9.00)

**HIGHEST RATED SPEED**

Testing:  
 1st c-rod trav.mm : 9.00  
 Speed 1/min : 750...755  
 2nd c-rod trav.mm : 4.00  
 Speed 1/min : 776...789  
 4th speed 1/min : 900  
 C-rod trav. mm : 0.00...1.00

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : BET 8,8 A 2  
Edition : 12.09.86  
Superceeded : 7.84  
Calibrating oil : ISO-4113

Combination no. : 0 401 846 481

Injection pump  
Pump designation : PE6P120A32ORS383  
EP type number : 0 411 826 109  
Governor  
Governor design. : RQV275...1100PA425-1  
Governor no. : 0 421 813 369

Customer-spec. information  
Customer : RVI

Engine : MIDS 062030

TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 1 688 901 019

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter  
x Wall thickness  
x Length mm : 6.00x1.50x1000

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.80...2.90  
: (2.75...2.95)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 10.00...11.00

#### BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 14.20...14.30

Del.quantity cm<sup>3</sup>/ : 15.1...15.3

100H.: (14.8...15.6)

Dispersion cm<sup>3</sup>/ : 0.5

100H.: (0.9)

2nd speed 1/min: 275.0

Contr.-rod trav. m: 8.6...8.8

Del.quantity cm<sup>3</sup>/ : 1.3...1.9

100H.: (1.0...2.2)

Dispersion cm<sup>3</sup>/ : 0.8

100H.: (1.2)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 275

Sleeve travel mm: 1.20...1.30

2nd speed 1/min: 450

Sleeve travel mm: 3.30...4.00

3rd speed 1/min: 800

Sleeve travel mm: 6.10...6.30

4th speed 1/min: 1100

Sleeve travel mm: 7.90...8.00

#### SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1170

Cont.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1100

Charge press. hPa : 700

Del.quantity cm<sup>3</sup>/ : 151.0...153.0

1000H.: (148.0...156.0)

Dispersion cm<sup>3</sup>/ : 5.00  
1000H.: (9.00)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 62...68

Setting point:

Speed 1/min : 1170

Contr.-rod trav.mm: 16.5

Testing:

1st c-rod trav.mm : 13.20

Speed 1/min : 1155...1165

2nd c-rod trav.mm : 4.00

Speed 1/min : 1315...1345

Speed 1/min : 1450

4th speed 1/min : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever

position degrees: 7...15

Testing:

Speed 1/min : 200

C-rod trav.mm min : 8.50

Speed 1/min : 275

C-rod trav.mm : 5.40...5.60

#### CONSTANT REGULATION

Speed 1/min : 275...365

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 700

Contr.-rod trav.mm: 14.20...14.30

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 12.40...12.50

2nd pressure hPa : 230

C-rod trav.mm : 13.70...13.80

3rd pressure hPa : 180

C-rod trav.mm : 12.80...13.00

#### SWITCH-OVER POINT

Speed 1/min : 195 (215)

#### FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : -

Speed 1/min : 500

Del. quantity cm3/ : 87.0...89.0  
1000H.: (84.0...92.0)

Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : BET 8,8 A 1  
Edition : 12.09.86  
Superceeded : 10.83  
Calibrating oil : ISO-4113

Combination no. : 0 401 846 488

Injection pump  
Pump designation : PE6P120A320RS383  
EP type number : 0 411 826 109  
Governor  
Governor design. : RQV275...1200PA425-2  
Governor no. : 0 421 813 403

Customer-spec. information  
Customer : RVI

Engine : MIDS 062030

1st version kW : 165.5  
Speed 1/min: 2400

TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 1 688 901 019

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter  
x Wall thickness  
x Length mm : 6.00X1.50X1000

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values \_ \_ \_ \_

START OF DELIVERY  
Test pressure, bar: 25...27



Prestroke mm : 2.80...2.90  
                  : (2.75...2.95)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

#### BASIC SETTING

1st speed 1/mi: 1200

Contr.-rod trav.mm: 13.90...14.0

Del.quantity cm3/ : 14.9...15.1

100H.: (14.6...15.4)

Dispersion cm3/ : 0.5

100H.: (0.9)

2nd speed 1/min: 275.0

Contr.-rod trav. m: 4.70...4.90

Del.quantity cm3/ : 0.8...1.4

100H.: (0.5...1.7)

Dispersion cm3/ : 0.8

100H.: (1.2)

(B) Setting of injection pump with  
externally-mounted governor

#### SLEEVE TRAVELS

1st speed 1/min: 275

Sleeve travel mm: 1.10...1.20

2nd speed 1/min: 450

Sleeve travel mm: 3.40...3.80

3rd speed 1/min: 850

Sleeve travel mm: 5.40...5.60

4th speed 1/min: 1200

Sleeve travel mm: 7.60...7.70

#### SLEEVE POSITION

Control-lever position

Degree: -1

Speed 1/min: 1310

Cont.-rod travelmm: 15.20...17.80

#### FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1200

Charge press. hPa : 700

Del.quantity cm3/ : 149.0...151.0

1000H.: (146.0...154.0)

Dispersion cm3/ : 5.00  
1000H.: (9.00)

#### HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 60...68

Testing:

1st c-rod trav.mm : 12.90

Speed 1/min : 1245...1255

2nd c-rod trav.mm : 4.00

Speed 1/min : 1395...1425

4th speed 1/min : 1550

C-rod trav.mm : 0.00...1.00

#### LOWEST RATED SPEED I

Control-lever

position degrees: 5...13

Testing:

Speed 1/min : 200

C-rod trav.mm min : 7.80

Speed 1/min : 275

C-rod trav.mm : 4.70...4.90

#### CONSTANT REGULATION

Speed 1/min : 275...380

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min : 500

Pressure hPa : 700

Contr.-rod trav.mm: 13.90...14.00

Measurement

Speed 1/min : 500

1st pressure hPa : -

C-rod trav.mm : 12.20...12.30

2nd pressure hPa : 225

C-rod trav.mm : 13.40...13.50

3rd pressure hPa : 185

C-rod trav.mm : 12.50...12.70

#### SWITCH-OVER POINT

Speed 1/min : 195 (215)

#### FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 700

Speed 1/min : 700

Del.quantity cm3/ : 143.0...149.0

1000H.: (140.0...152.0)

Charge press. hPa : -

Speed 1/min : 500

Del. quantity cm<sup>3</sup>/ : 90.0...92.0  
1000H.: (87.0...95.0)

Remarks:

# BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : RVI 9,8 B 2  
Edition : 12.09.86  
Superceeded : 11.85  
Calibrating oil : ISO-4113  
  
Combination no. : 0 401 846 497  
  
Injection pump  
Pump designation : PE6P120A32ORS438-1  
EP type number : 0 411 826 133  
Governor  
Governor design. : RQV275...1200PA648  
Governor no. : 0 421 813 345

Customer-spec. information  
Customer : RVI

Engine : MIDS062030

1st version kW : 150.0  
Speed 1/min: 2400

## TEST BENCH REQUIREMENTS

Calibrating-oil  
inlet temp. °C : 38...42

Overflow valve : 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder  
assembly : 1 688 901 019

Opening  
pressure, bar : 207...210

Perforated-plate  
diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter  
x Wall thickness  
x Length mm : 6.00X1.50X1000

(A) Injection pump setting values  
Insp. values in parentheses  
Set constant delivery quant.  
per values -----

START OF DELIVERY  
Test pressure, bar: 25...27

Prestroke mm : 3.50...3.60  
                  : (3.45...3.65)  
Contr.-rod trav.mm: 9.00...12.00  
Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing<sup>o</sup>CS: 0-60-120-180-240-300  
Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 1

**BASIC SETTING**

1st speed 1/mi: 1200  
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Contr.-rod trav.mm: 10.20...10.30  
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Del.quantity cm<sup>3</sup>/ : 13.3...13.5  
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100H.: (13.0...13.8)  
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Dispersion cm<sup>3</sup>/ : 0.5  
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100H.: (0.9)  
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2nd speed 1/min: 275.0

Contr.-rod trav. m: 6.40...6.60

Del.quantity cm<sup>3</sup>/ : 1.5...2.1

100H.: (1.2...2.4)

Dispersion cm<sup>3</sup>/ : 0.8

100H.: (1.2)

(B) Setting of injection pump with  
externally-mounted governor

**SLEEVE TRAVELS**

1st speed 1/min: 275  
Sleeve travel mm: 1.20...1.40

2nd speed 1/min: 450  
Sleeve travel mm: 3.30...4.00

3rd speed 1/min: 850  
Sleeve travel mm: 5.90...6.20

4th speed 1/min: 1200  
Sleeve travel mm: 8.20...8.40

**SLEEVE POSITION**

Control-lever position

Degree: -1

Speed 1/min: 1230

Cont.-rod travelmm: 15.20...17.80

**FULL-LOAD DELIV. AT FULL-LOAD STOP**

1st version

Speed 1/min: 1200

Del.quantity cm<sup>3</sup>/ : 133.0...135.0

1000H.: (130.0...138.0)

Dispersion cm<sup>3</sup>/ : 5.00

1000H.: (9.00)

**HIGHEST RATED SPEED**

1st version

Control-lever

position degrees: 61...69

**Testing:**

1st c-rod trav.mm : 9.20

Speed 1/min : 1255...1265

2nd c-rod trav.mm : 3.90

Speed 1/min : 1355...1385

4th speed 1/min : 1500

C-rod trav.mm : 0.00...1.00

**LOWEST RATED SPEED I**

Control-lever

position degrees: 8...16

**Testing:**

Speed 1/min : 200

C-rod trav.mm min : 8.00

Speed 1/min : 275

C-rod trav.mm : 4.90...5.10

**CONSTANT REGULATION**

Speed 1/min : 275...360

**SWITCH-OVER POINT**

Speed 1/min : 195 (215)

**FUEL-DELIVERY CHARACTERISTICS**

Speed 1/min : 750

Del.quantity cm<sup>3</sup>/ : 116.0...122.0

1000H.: (113.0...125.0)

Remarks: